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An Analysis Of Certain Social And Economic Factors In Relationship To Reading Test Scores Reported By Selected California School Districts

Len Lawrence Trout Jr.
University of the Pacific

AN ANALYSIS OF CERTAIN SOCIAL AND ECONOMIC FACTORS IN RELATIONSHIP TO READING TEST SCORES REPORTED BY SELECTED CALIFORNIA SCHOOL DISTRICTS

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AN ANALYSIS OF CERTAIN SOCIAL AND ECONOMIC FACTORS IN RELATIONSHIP TO READING TEST SCORES REPORTED BY SELECTED CALIFORNIA SCHOOL DISTRICTS

Abstract of Dissertation

The purpose of this study was to analyze and test the extent and signifi-
e of the differences of certain reported social and economic factors that
reported by both high-achieving and low-achieving school districts when
measure of achievement was the results of the Stanford Reading Test admin-
red to first grade pupils.

Twenty-eight indexes were utilized in addition to the selection index of
Cent of Pupils Scoring Below Q_1 in the California State mandated Stanford
ing Test.

School districts, reporting between three hundred and three hundred seventy
first grade scores, were identified. The six with the least per cent and
six with the greatest per cent of pupils scoring below Q_1 of the Stanford
ing Test were selected and identified as high-achieving and low-achieving
ricts respectively.

Pearson Product Moments of Correlation were computed for the indexes. A
-wise multiple regression analysis was computed with the index Per Cent of
ls Scoring Below Q_1 as the dependent variable for the high-achieving and
achieving districts. A confidence level of one percent (.01) was selected
the analysis and correlations.

The findings of the step-wise multiple regression analysis for the high-
eving districts reported the following significant indexes: 1) Per Cent
upils Scoring Above Q_3; 2) The General Purpose Tax Rate; 3) Total Adminis-
ion, Principals' and Supervisors' Salaries as Per Cent of Current Expenses
ducation; and 4) Per Cent of Spanish Surname and Non-white to Other-white
hers.

The findings for the low-achieving districts reported the following indexes
ignificance: 1) Per Cent of District Income from Federal Sources; 2) Per
of Pupils Scoring Above Q_3; 3) Beginning District Elementary Teachers'
ry, and 4) Other Book Expenditures as Per Cent of Current Expenses of Edu-
on.

On the basis of the data analyzed by this study the hypothesis that there
no significant differences between the indexes within the high and low-
eving districts was rejected.

Since the focus of this study was upon districts rather than pupils the
ings are within the authority and power of the district to effect changes
ugh the establishment of experimental situations within schools or the
rict. The findings of this study strongly suggest the following: 1) Under-
ng cross-sectional study with larger sample utilizing a) the indexes
tified by this study as significant, and b) add other indexes to test for
r significance; 2) Establishing experimental situations in which certain of
significant variables are controlled. Specific attention is indicated for
indexes of Per Cent of Other Book Expenditures, Beginning Teachers' Salaries
l Administration, Principals' and Supervisors' Salaries and Per Cent of
ish Surname and Non-white to Other-white Teachers; 3) Studying the racial
ethnic indexes to determine changes in extent of incidence and change in
rity group representation within these indexes and the changes in reported
ing test scores.

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The writer appreciates the professional assistance, guidance, and encouragement of the members of his dissertation committee; namely, Dr. J. Marc Jantzen, Chairman; Dr. Heath W. Lowry; Dr. W. Preston Gleason; Dr. Joseph B. Botond-Blazek; and Dr. James J. McIlwrath.

Specific recognition is deserved by Dr. J. Marc Jantzen for his direction and interest in making this study a learning experience. His consideration and support are warmly remembered.

The staff members of the California State Department of Education were most helpful in allowing for the collection of the data. Dr. Robert G. Whittemore, Jr. was most generous of his aid in the statistical aspects of this study.

Finally the writer dedicates this study to his wife, Frances, and his children, Judson, Gregory, Francia, and Len, without whose sacrifices, loyalty, and encouragement the study could never have been completed.

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CHAPTER I

THE PROBLEM AND DEFINITION OF TERMS USED

I. INTRODUCTION

> Educational leaders have long been concerned about the enormous differences in the taxable resources of states and local communities. It has long been contended that as long as education is financed largely through state and local taxes, these differences in the taxable resources of states and communities will result in inequalities of educational opportunity.[1]

General school achievement is a relatively stable characteristic which develops quickly during the early school years, most notably in the first three grades, according to B. S. Bloom. Like other stable human characteristics it is more strongly affected by the environment in this period of rapid growth than later. For the first grader, school has become an important part of his milieu, yet it is only a small part of the total.[2]

American public school education exists as a state and local community partnership.[3] In California, the state mandates that specific subjects be taught not later than

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[1]Myron Lieberman, "Equality of Educational Opportunity," Language and Concepts in Education, eds. B. Othanel Smith and Robert H. Ennis (Chicago: Rand McNally and Company, 1961), p. 127.

[2]Benjamin S. Bloom, Stability and Change in Human Characteristics, (New York: John Wiley and Sons, Inc., 1964).

[3]Paul R. Mort, Principles of School Administration (New York: McGraw-Hill Book Company, Inc., 1946), pp. 100-101.

certain grades in all elementary schools. Reading, writing, spelling, arithmetic, and health must be taught beginning in grade one.[4] California also mandates that a minimum of fifty per cent of each school week be devoted to reading, writing, language study, spelling, arithmetic, and civics in grades one to six inclusive.[5]

Staff qualifications are state mandated.[6] Text books are designated and supplied by the state.[7] The state also designates supplementary texts.[8] The state supplies some of the funds for the operation of the schools, and the local community is delegated the responsibility of implementing the mandates of the state and certain portions of the necessary funds.[9]

II. THE PROBLEM

Statement of the Problem. The problem was to analyze and test the extent and significance of the differences of certain reported socio-economic factors that are common to

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[4] Education Code, State of California (Sacramento: State Printing Division, 1961), Vol. I, Sec. 7604, p. 372.

[5] Ibid., Sec. 7605, p. 373.

[6] Ibid., Sec. 13101-13570, pp. 520-619.

[7] Ibid., Sec. 9501, 9502, p. 431.

[8] Ibid., Sec. 9551, p. 431.

[9] Ibid., Sec. 17300, Vol. II, pp. 887-888.

both high-achieving and low achieving school districts. The measure of achievement was the results of the state mandated Stanford Reading Test, Primary I Level, Form W.

Within the framework of the California system of public education there exists certain uniformity and certain equalizing influences. The California Education Code states as follows:

> The system of public school support should effect a partnership between the state, the county, and the local district, with each participating equitably in accordance with its relative ability. The respective abilities should be combined to provide a financial plan... known as the foundation program for public school support...The system of public school support should provide through the foundation program, for essential educational opportunity for all who attend the public schools.[10]

Yet there exists a wide variation in the academic achievement of pupils attending California public schools as reported by scores of standardized achievement tests.[11]

Significance of the study. This study is of importance for the following reasons:

1. The factors analyzed in this study are data that are required reporting for California school districts and are common to the data reporting required by many of the other forty-nine states.

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[10] Ibid., Sec. 17300, pp. 887-889.

[11] California State Department of Education, Bureau of Educational Research, Report of the Results of Tests Administered in Grades 1, 2, 3, 6, and 10 during the 1966-67 School Year, p. 4.

2. The significant factors that might be found by this study may provide data for future longitudinal studies of change and growth.

3. Much of the prior research on reading and reading achievement has focused on methodology, curriculum content and grade placement of pupils. This study is an effort to add data to the socio-economic area of educational research.

4. With identification and evaluation of the socio-economic factors of education, advances in raising the reading attainment of culturally disadvantaged children, as well as other children, might be achieved.

5. With the identification of the socio-economic factors of education related to reading achievement predictions of success in other academic fields might be possible with greater accuracy.

III. PURPOSE OF THE STUDY

The specific purpose of this study was to test, through statistical procedures, the following hypothesis:

1. There is no difference in the extent of occurrence of certain social or economic factors within selected California school districts when grouped as high-achieving and low-achieving districts when the measure of achievement utilized is the per cent of pupils scoring below Q_1 of the state mandated Stanford Reading Test, Primary I Level, Form W, administered in May 1966 to all first grade pupils in California public schools.

IV. ASSUMPTIONS AND LIMITATIONS

The assumptions upon which this study was based are as follows.

Assumptions

1. The Stanford Reading Test, Primary I Level, Form W, designated by the California State Board of Education as

the state mandated reading achievement test[12] was an appropriate measure of reading achievement. The test was impartially administered to all pupils in grade one in May 1966, and the results correctly tabulated and reported.

2. The on-going reading programs of the studied school districts was in essence the same. The California Education Code mandates the program[13] and the minimum of time.[14] The first grade California State Reading Text Books are approved by the Curriculum Commission of the State Board of Education and these are provided for all schools.[15]

Reading instruction in almost all schools starts from a similar basis. Basal readers from a graded series are used by ninety-eight per cent of the first grade teachers on all or most of the days of the school year.[16]

3. The school district population was representative of the total district population.

4. The data that were reported by the school districts are valid and were accepted for purposes of this study as valid.

The following statements were limitations upon which the study was based.

Limitations

1. The school districts studied must remain anonymous. Access to data relating to racial and ethnic make-up of districts was granted with the agreement that this limitation would be observed. Data relating to the Stanford

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[12]"Report of Actions Taken by State Board of Education," Minutes of California State Board of Education, January 12 and 13, 1966, Item 5,

[13]California Education Code, Sec. 7604, op. cit., p. 372.

[14]Ibid., Sec. 7605, p. 373.

[15]Ibid., Sec. 9501, 9502, p. 431.

[16]Allen H. Barton and David E. Wilder, "Research and Practice in the Teaching of Reading: A Progress Report," Innovation in Education, (New York: Bureau of Publications, Teachers College, 1964), pp. 378-379.

Reading Tests results of any school district were not to be reported without permission from the identified school district.

2. The social and economic factors selected for this study were reflected in data generally required to be compiled and reported by all California school districts that were operating schools.

3. All data presented were for the 1965-66 school year. If these data were not available, the next preceeding (1964-65) school year was used and these data were so designated when presented.

V. DEFINITION OF TERMS USED

The following definitions of terms have been used throughout this study.

1. Aid for Dependent Children (AFDC): Criteria utilized by the California State Department of Education, Office of Compensatory Education, Bureau of Compensatory Education Administration and Finance Office were the basis of acceptance and determination of qualification of persons receiving Aid for Dependent Children (AFDC).

2. Administration Expenses: Expenses that were classified item D-100 on the California State Department of Education School Budget Forms and were so reported to the California State Department of Education, Bureau of Educational Research.

3. Principals' Salaries: Expenses that were classified item D-211 on the California State Department of Education School Budget Forms and were so reported to the California State Department of Education, Bureau of Educational Research.

4. Supervisors' Salaries: Expenses that were classified D-212 on the California State Department of Education School Budget Forms and were so reported to the California State Department of Education, Bureau of Educational Research.

5. Average District Teachers' Salary: Average salary was computed by the actual salary paid, including bonus for master's and doctor's degrees where applicable, but excludes extra pay for extra duty or special assignments to elementary teachers of the district.[17]

6. Beginning Teachers' Salary: Minimum salary for starting teachers with Bachelors Degree.[18]

7. Average Daily Attendance (ADA): For elementary school districts the ADA was the total pupils in kindergarten and all grades in the elementary schools of the district reported on County Superintendents Reports, Form J-26 or J-41. For unified school district the ADA is the total in kindergarten, elementary school, high school, and junior college including adults as reported by County Superintendents Report, Form J-26 or J-41.[19]

8. Assessed Valuation: Included county-assessed secured and unsecured property and the assessments of utility properties established by the State Board of Equalization.[20]

9. Current Expenses of Education: Based on total current expenses of education Budget Classes D-100 through D-800 excluding that of Transportation Budget Accounty Class D-500, certain fixed charges of Food Services Personnel and charges for Lease of Plant and Equipment, and Economic Opportunity Training.[21]

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[17] California Teachers Association Bulletin, No. 200, "Teachers Salaries and Salary Schedules, 1966-67," (Burlingame: California Teachers Association, December 1966), p. vi.

[18] Ibid., p. v.

[19] California State Department of Education, Average Daily Attendance and Selected Financial Statistics of California State Department 1965-66 (Sacramento: Bureau of Educational Research, 1967), p. v.

[20] Houston I. Flournoy, State Controller, Annual Report of Financial Transactions Concerning School Districts of California, Fiscal Year 1965-66 (Sacramento), p. ix.

[21] California State Department of Education, op. cit., p. vi.

10. Disadvantaged: The terms "culturally deprived," "educationally deprived," "deprived," "underprivileged," "disadvantaged," "lower class," "lower socio-economic group" were used interchangeably throughout this study.[22]

11. General Purpose Tax Rate: Included that part which is subject to the legal maximum as specified in the Education Code and rates which were established for specific purposes which were not subject to the legal maximum.[23]

12. High-Achieving Districts: California School Districts selected for purposes of this study which had the least per cent of pupils in grade one with scores below the first quartile (Q_1) of the published norms for the Stanford Reading Test, Primary I Level, Form W.

13. Low-Achieving Districts: California School Districts selected for purposes of this study which had the greatest percentage of pupils in grade one with scores in the first quartile (Q_1) of the published norms for the Stanford Reading Test, Primary I Level, Form W.

14. Percentage of District Income from Federal Funds: Included school district income received under Public Law 874, Public Law 864, Forest Reserve Funds, and other federal sources.[24]

15. Percentage of District Income from State Apportionment: Included school district income received from State School Fund Apportionments and includes Federal Elementary and Secondary Education Act monies.[25]

16. Percentage of District Income from Local Taxes: Included local school district taxes, sales, and rentals.[26]

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[22]Frank Riessman, The Culturally Deprived Child (New York: Harper & Brothers, 1962), p. 1.

[23]Flournoy, op. cit., p. ix.

[24]California School Accounting Manual, Vol. 23, No. 2, (Bulletin of the California State Department of Education), June, 1964.

[25]Flournoy, op. cit., p. x.

[26]California School Accounting Manual, op. cit.

17. $Q_1 - Q_3$: Q_1 being the point below which twenty-five per cent of the measurements fall and above which seventy-five per cent fall, and Q_3 being the point below which seventy-five per cent fall and above which twenty-five per cent fall.27

18. Racial and Ethnic Distribution of Pupils and Employees: Each school district reported to the Bureau of Intergroup Relations, California State Department of Education before October 21, 1966, the end of the first school month, fall 1966, on Form CE-IR-1, the total of white and non-white pupils and employees. The white populations were subdivided into Spanish Surname and Other White. The non-white populations were subdivided into Negro, Chinese, Japanese, Korean, American Indian, and Other Non-white.

19. Stanford Reading Test: The California State Board of Education designated the Stanford Reading Test as the mandated test required by the Miller-Unruh Basic Reading Act of 1965. The specific tests designated for grade one was Stanford Reading Test, Primary I Level, Form W, and was administered to all pupils in grade one during May, 1966.28

20. Teachers' Class Load: Required by provision of California Education Code, Section 17503, reported by all California School Districts on Form J-6, California State Department of Education School Budget Form, and presented as a pupil teacher ratio.

21. Teachers' Salaries: California Education Code, Section 17503, defined teachers' Salaries and the expenditure was reported on California Department of Education School Budget Form, Item D-213.

22. Text Book Expenditures: Expenditures for those books selected by the Curriculum Commission of the State Board of Education appearing on the State Text Book List and purchased according to Form J-26 or J-41 were included as text book expenditures.

27Allen L. Edwards, Statistical Methods for the Behavioral Sciences (New York: Rinehart and Company, 1954), p. 47.

28Everett T. Calvert, "California State Testing Program - 1964-65," California Education, Vol. 3 (June, 1966), p. 30.

23. Other Books: Books other than those of the California State Text Book List.

24. Indexes, Variables, and Factors: The following indexes or variables were selected and were the factors analyzed in this study:

24.1 Assessed Valuation Per Elementary ADA.

24.2 Cost per ADA of Current Expenses of Education.

24.3 Teachers' Salaries Expressed as Per Cent of Current Expenses of Education.

24.4 Teachers' Class Load, Grades one-three average.

24.5 Total Administration, Principals' and Supervisors' Salaries as Per Cent of Current Expenses of Education.

24.6 Textbook Expenditures as Per Cent of Current Expenses of Education.

24.7 Other Book Expenditures as Per Cent of Current Expenses of Education.

24.8 Average District Elementary Teachers' Salary.

24.9 Beginning District Elementary Teachers' Salary.

24.10 Per Cent of District Income from Federal Government.

24.11 Per Cent of District Income from State Apportionment.

24.12 Per Cent of District Income from Local Taxes.

24.13 Per Cent of District Children Receiving Aid for Dependent Children (AFDC).

24.14 Per Cent of Non-white to White District Enrollment.

24.15 Per Cent of Spanish Surname to Other White District Enrollment.

24.16 Per Cent of Negro to White District Enrollment.

24.17 Per Cent of Spanish Surname and Non-white to Other White District Enrollment.

24.18 Per Cent of Non-white to White District Teachers.

24.19 Per Cent of Spanish Surname to Other White District Teachers.

24.20 Per Cent of Negro to White District Teachers.

24.21 Per Cent of Spanish Surname and Non-white to Other White District Teachers.

24.22 Per Cent of Non-white to White District Teacher-Community Aides.

24.23 Per Cent of Spanish Surname to Other White District Teacher-Community Aides.

24.24 Per Cent of Negro to White District Teacher-Community Aides.

24.25 Per Cent of Spanish Surname and Non-white to Other White District Teacher-Community Aides.

24.26 Total ADA Cost of Education, including Transportation.

24.27 General Purpose Tax Rate, District Tax Rate Levied.

24.28 Per Cent of Pupils Scoring Above Q_3 Publisher's Norms, Stanford Reading Test, Primary I Level, Form W, Grade One.

24.29 Per Cent of Pupils Scoring Below Q_1, Publisher's Norms, Stanford Reading Test, Primary I Level, Form W, Grade One.

VI. SUMMARY

The first chapter of this report has given an introduction to the dissertation, presented the problem, indicated the significance of the study, stated the purpose of the study, manifested the assumptions and limitations upon which the research was based, defined the important terms used in the report and specified the indexes or variables selected for analysis.

Five additional chapters complete the study. They are as follows: (1) Chapter II: Review of Related Literature, (2) Chapter III: Characteristics of the Sample, (3) Chapter IV: Correlations for the Indexes, (4) Chapter V: Step-Wise Multiple Regression, and (5) Chapter VI: Summary of Findings, Conclusions and Recommendations for Further Study.

CHAPTER II

REVIEW OF RELATED LITERATURE

The literature pertinent to this study was reviewed in two specific areas: (1) that area relating to the sociological determinants of academic achievement, and (2) the financial determinants of academic achievement.

The following sociological determinants were investigated: (1) demographic and ecological variables which included socio-economic status, racial and ethnic composition, age and sex, and school size; (2) specific role relationships which included student to student, teacher to student, and student-to-family relationships.

The following financial determinants were reviewed: (1) the extent of the financial support and its effects on educational achievements, (2) the sources of income, and (3) the effect of expenditures for educational personnel on achievement.

I. SOCIOLOGICAL DETERMINANTS

The distinguishing of the sociological characteristics from the psychological characteristics was done on the basis of whether characteristics of social settings have any general effects on achievement irrespective of the personality of the individual.

Demographic and Ecological Variables

These variables are related to performance since they symbolize certain uniformities of personality and these are in turn related to academic achievement.

1. Socio-economic Status and Intelligence Variables. Lavin[1] reported that if students are equated for intelligence, variations in social class are still associated with variations in achievement and concluded that socio-economic status must summarize the variable of intelligence. Crowley[2] declared that one factor positively associated with socio-economic status is intelligence. Knief[3] and Pinneau[4] reported similar findings.

Paul J. Barnes[5] correlated IQ scores with scores on subtests of achievement measures for pupils from grades one

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[1]David E. Lavin, The Prediction of Academic Performance (New York: Russell Sage Foundation, 1965), p. 124.

[2]Francis J. Crowley, "The Goals of Male High School Seniors," Personnel and Guidance Journal, Vol. 37:488-92, (March 1959), p. 489.

[3]Lotus M. Knief and James B. Stroud, "Intercorrelation Among Various Intelligence, Achievement and Social Class Scores," Journal of Educational Psychology, 50:117-20 (June 1959), p.117.

[4]Samuel R. Pinneau and Harold E. Jones, "Development of Mental Abilities," Review of Educational Research, 28: 392-400, (December 1958), p. 394.

[5]Paul J. Barnes, "Prediction of Achievement in Grades One through Four," Educational and Psychological Measurement, Vol. 15:493-94, (Winter 1955), p. 494.

through four. The correlation coefficient ranged from .31 to .63. They showed a tendency to increase from the first to the second grade and tended to be stablized from the second through fourth. This tended to support an assumption that the scores of achievement tests given to first graders were less dependent upon the IQ of the pupil than it would be if they were given at higher grade levels.

According to Goslin[6] it was apparent that inherited ability was only one factor in the determination of a test score. Goslin further described the following factors that were influential in determining an individual's achievement test score:

> The major variables are...the individual's inherited potential, both in terms of (1) general intelligence, and (2) specific capacities for training..., plus the environment in which the organism has developed. Within the general category of environmental influences are... the effects of (1) the individual's cultural background ...(2) his formal training experiences, (3) his experiences with similar tests, and (4) his general health.[7]

Jensen[8] tested groups of Mexican-American and Anglo-American fourth and sixth grade pupils. The main findings were that on direct measures of learning ability Anglo-

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[6]David A. Goslin, The Search for Ability: Standardized Testing in Social Perspective (New York: Russell Sage Foundation, 1963), p. 134.

[7]Ibid., pp. 151-2.

[8]Arthur R. Jensen, "Learning Abilities of Mexican-American and Anglo-American Children," California Journal of Educational Research, 12:147-59, (September 1961), p. 158.

Americans of low IQ, measured by the California Test of Mental Maturity, were slow learners as compared with Mexican-Americans of the same IQ. Mexican-Americans of high IQ did not differ significantly from Anglo-Americans in learning ability. This suggested that Mexican-Americans with low IQ were actually quite normal in basic learning ability though they may be poor in scholastic performance for reasons other than inherently poor learning ability.

"One startling result is the extremely high correlation between IQ scores and achievement," states Charles S. Benson.[9] This study showed that the simple correlations between the socio-economic variables and IQ are practically identical with the relations of the socio-economic variables to achievement. These researchers stated that:

> When children in primary grades are segregated in 'ability groups' on the basis--even in part--of standardized test scores, it now appears clear that they are placed in one group or another in accordance with their home environment. IQ scores may truly be predictive of the ability of children from the lower socio-economic strata to perform in the conventional school setting, but it is not at all certain that they are predictive of their ability to perform in a school setting which takes account of the fact that their home environments are different from the middle class homes.[10]

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[9]Charles S. Benson, William K. Schmelzle, Robert H. Gustafson, and Richard A. Lange, State and Local Fiscal Relationships in Public Education in California, Report of the Senate Fact Finding Committee on Revenue and Taxation (Sacramento: The Senate of the State of California, March 1965), p. 45.

[10]Ibid., p. 45.

2. Socio-economic Status and Achievement Variables. Social stratification exists within a framework of economic stratification, reported Kahl.[11] Other investigators[12] agreed that the kind of an education an American child gets depends largely upon the social-class position of the family.

Warner[13] further stated that the American school reflects the socio-economic order in everything that it does; in what it teaches, whom it teaches, who does the teaching, who does the hiring and firing of the teachers, and what the children learn in and out of the classroom.

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[11]Joseph A. Kahl, The American Class Structure (New York: Holt, Rinehart & Winston, 1957), p. 119.

[12]James S. Davie, "Social Class Factors and School Attendance," Harvard Educational Review, 23:175-85 (Winter 1953).

Robert J. Havighurst, et. al., Growing up in River City (New York: John Wiley & Sons, 1962).

August B. Hollingshead, Elmtown's Youth, (New York: John Wiley & Sons, 1949).

W. Lloyd Warner, Marcia Meeker and Kenneth Eels, Social Class in America (New York: Harper & Brothers, 1960).

W. Lloyd Warner, Robert J. Havighurst, and Martin B. Loeb, Who Shall be Educated? (New York: Harper and Brothers, 1944).

[13]W. Lloyd Warner, Robert J. Havighurst, and Martin B. Loeb, Ibid., p. xii.

Riessman[14] discussed the magnitude of problems of lower socio-economic groups and stated that in 1950 only one child out of every ten attending public schools in fourteen largest cities were culturally deprived. By 1960 this figure had risen to one in three and it was estimated that by 1970 one child of every two enrolled may be from this disadvantaged group.

Kaplan[15] presented additional research on this area by stating that the culturally deprived usually exhibited two characteristics: (1) they were from the lower socio-economic groups in the community, and (2) were notably deficient in cultural and academic strengths. The latter characteristic was usually, but not always, a consequence of the first factor.

The investigator found numerous studies relating to academic achievement and socio-economic status. An early study by Robinson[16] of pupils who failed the Gray Oral Reading Test found that in thirty cases studies: (1) 54.5 per cent came from maladjusted homes, (2) 50 per cent had

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[14]Frank Riessman, op. cit., p. 1.

[15]Bernard A. Kaplan, "Issues in Educating the Culturally Disadvantaged," Phi Delta Kappan, 45:70-76, November 1963, p. 71.

[16]Helen M. Robinson, Why Pupils Fail in Reading, (Chicago: The University of Chicago Press, 1946).

visual anomalies, (3) 32 per cent had emotional problems, and (4) in only 18 per cent were incorrect reading methods pertinent.

The study by Hill and Giammatteo[17] concluded that socio-economic status does affect scholastic achievement including reading, and that children from lower socio-economic levels do not overcome this cultural deficiency by the end of the third grade.

Earlier, Rosen[18] reported that achievement motivation was directly related to socio-economic status. When motivation was controlled, the relation between status and grades was almost erased. He also equated achievement values with socio-economic factors and found the following achievement values of significance:

1. Possible to manipulate one's environment.

2. Delay immediate pleasure for long-run qualification.

3. Value of shedding affective family ties in favor of mobility.[19]

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[17]Edwin H. Hill and Michael C. Giammatteo, "Socio-economic Status and Its Relationship to School Achievement in the Elementary School," Elementary English, 40:265-270, (March 1963), p. 166.

[18]Bernard C. Rosen, "The Achievement Syndrome: A Psychocultural Dimension of Social Stratification," American Sociological Review, 21:203-211 (April 1956), p. 210.

[19]Ibid.

Lavin[20] summarized the investigation of nineteen studies relating socio-economic status to academic performance. Thirteen reported direct relationship to academic performance and six reported inverse relationships. He accounted for this difference as follows:

> ...Most of the research on SES and academic performance does not sample the upper-class segment of the SES Range...the inconsistencies between the results of the various studies...can be accounted for by the differences in SES range sampled...The relationship between SES and academic performance is positive through most of the SES range, but at the upper SES levels, it is inverse. When the SES sample does not include this upper segment, positive relations will be found. When the sample does include the upper range and does not go below the middle class inverse relations will be found.[21]

Havighurst[22] reported that the upper class accounted for approximately two per cent of the population and the upper-middle class eight per cent of the population. This total of ten per cent was not as apparent in public education and was not subject to intensive educational research.

A different aspect of this research was presented by Robert E. Herriott and Nancy Hoyt St. John.[23] They reported

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[20]Lavin, op. cit., p. 125

[21]Ibid., p. 126.

[22]Robert J. Havighurst, "Social-Class Influences on American Education," The Sixtieth Year Book National Society for the Study of Education, Part II (Chicago: National Society for the Study of Education, 1961), pp. 120-121.

[23]Robert E. Herriott and Nancy Hoyt St. John, Social Class and the Urban School (New York: John Wiley and Sons, Inc., 1966), p. 5.

that during the past twenty years much valuable research on the relation of social class to education in America had been conducted. However, it had tended to emphasize the social class of the child instead of the school. This research had also concentrated on slum schools only, rather than contrasting schools of low, medium and high social class levels and on the pupils of slum schools instead of on their teachers and principals.

Chall reports, "Raising the reading attainment of culturally-disadvantaged children is too important a problem for us to concentrate all our efforts on one solution."[24]

3. Racial and Ethnic Composition Variables. Race and ethnic composition of minority groups are one of the variables closely associated with socio-economic status. Deutsch[25] wrote that being lower-class, Negro or white, made for lower language scores, being Negro made for lower scores, but being both Negro and lower-class did not disproportionately make for lower language scores.

Myrdal[26] wrote in 1944 that social discrimination was powerful as a means of keeping the Negro down in all

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[24]Jeanne S. Chall, Learning to Read: The Great Debate (New York: McGraw-Hill Book Company, 1967), p. 311.

[25]Martin Deutsch, "The Role of Social Class in Language Development and Cognition," American Journal of Orthopsychiatry, 35:77-88 (January 1965), pp. 86-7.

[26]Gunnar Myrdal, An American Dilemma: The Negro Problem and Modern Democracy, Twentieth Anniversary Edition (New York: Harper and Row Publishers, Inc., 1962), p. 642.

other respects. He further reported that it is an impossible proposition to educate the American Negro and at the same time keep them satisfied with their lower caste position.[27]

Coleman, et al.,[28] in their massive study on equality of educational opportunity reported that regardless of the non-school factors--poverty, community attitudes, low educational level of parent--which put minority children at a disadvantage in the verbal and non-verbal skills when they entered the first grade, the fact was that schools did not overcome it.

Herriott[29] reported that of forty-seven elementary schools in the highest socio-economic status category, forty-four had fewer than ten per cent non-white (twenty-two had none), while of forty-seven elementary schools of lowest socio-economic status only eight had fewer than ten per cent non-white. He further reported that race and socio-economic status were highly intertwined.[30]

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[27] Ibid., p. 657.

[28] James S. Coleman, et al., Equality of Educational Opportunity (Washington D.C.: U. S. Department of Health, Education and Welfare, Office of Education, Government Printing Office, OE 38000, 1966), p.20.

[29] Herriott, op. cit., pp. 26-7.

[30] Ibid., p. 25.

This was supplemented by the findings of Weiner[31] which presented a high correlation in reading achievement among both the culturally-disadvantaged and middle-class Negro and white children according to accepted prevailing methods of teaching.

4. Age and Sex as Variables. Edmonds'[32] investigation found that sex cannot be assumed as a valid predictor of verbal ability but the socio-economic level of the pupil was a far more valid and consistent index. Any consideration of curriculum or sectioning based purely on sex appeared to be without foundation. However, Chall[33] reported that studies of reading achievement, especially at the lowest elementary level, have found that girls perform better than boys.

Hughes[34] reported that sex differences were not enough to affect the results of her study since sex differences are equitably distributed.

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[31]Max Weiner and Shirley Feldman, "Validation Studies of a Reading Prognosis Test of Children of Lower and Middle Socio-economic Status," Educational and Psychological Measurement, 23:807-14 (Winter 1963), p. 814.

[32]William S. Edmonds, "Sex Differences in the Verbal Ability of Socio-economically Depressed Groups," Journal of Educational Research, 58:61-64, October 1964, p. 63.

[33]Chall, op. cit., ff p. 156.

[34]Mildred C. Hughes, "Sex Differences in Reading Achievement in Elementary Grades," Supplemental Educational Monograph, No: 77:102-106 (1953), p. 105.

In the area of age, Carroll[35] investigated third grades and found that the few months of additional growth that average third graders have might represent an advantage when the child embarks on his formal education. The lower achievement of the underage group might be accounted for by the fact that they had been presented with learning experiences before they reached their peak performance in coping with those tasks. This study further found that differences of sex were not of significance but they were in the expected girl-over-boy direction.[36]

Chall's[37] findings supporting the girl-over-boy superiority in reading achievement were modified by the assumptions that this might have been due to social cultural factors; more women than men teachers in the elementary grades; and the reading materials presented were more interesting for girls. Developmental differences due to the earlier maturation of girls might have been another factor.[38]

5. School Size as a Determinant. The research in this area tended to agree that something larger than a small school

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[35]Marian L. Carroll, "Academic Achievement and Adjustment of Underage and Overage Third Graders," Journal of Educational Research, 56:415-19 (April 1963), p. 417.

[36]Ibid., p. 417.

[37]Chall, op. cit., p. 156.

[38]Ibid.

results in better educational opportunities and better achievement test results for pupils. Street, et al.,[39] reported a strong likelihood that students in elementary schools above 300 enrollment (in Kentucky) tended to outperform students in smaller schools.

Faber[40] reported the ideal size of a school district appears to be between 10,000 and 20,000 pupils while Swanson[41] asserted that communities having 20,000 to 50,000 people offer optimum conditions for promoting school quality. Ovsiew[42] reported that districts of less than 2,500 enrollment may fail to offer satisfactory educational opportunities. The National Conference of Professors of Educational Administration[43] reported the per capita cost of education in relation to

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[39]Paul Street, James H. Powell and John W. Hamblen, "Achievement of Students and Size of School," Journal of Educational Research, 55:261-66 (March 1962), p. 266.

[40]Charles F. Faber, "The Size of a School District," Phi Delta Kappan, 48:33-5 (September 1966), p. 35.

[41]Arthur D. Swanson, "Relations Between Community Size and School Quality," Institute of Administrative Research, Research Bulletin (October 1961), p. 3.

[42]Leon Ovsiew and William B. Castetter, Budgeting for Better Schools, (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1960), p. 245.

[43]National Conference of Professors of Educational Administration, Problems and Issues in Public School Finance (New York: Bureau of Publications, Teachers College, Columbia University, 1952), p. 103.

quality is generally considered unsatisfactory in elementary schools with attendance units of fewer than 175 to 200 pupils and district units having less than forty teachers.

Specific Role Relationship Variables

The data reported by this investigation did not report specific role variables. Role relationships are included in this study of related literature as an aid in interpreting the race and ethnic composition of pupils, teachers, and teachers' aides data.

1. Student-to-Student Variables. Benson[44] reported that children learn from peers and they cannot always be mixed with those who might provide the best environment. This was one of the reasons why complete equality of educational opportunity cannot be achieved. Coleman[45] reported along similar lines that a pupil's achievement was strongly related to the educational background and aspirations of the other students in his school.

Testing a hypothesis that there was a negative relationship between the degree of segregation and the aspiration level of Negro students, St. John's[46] findings failed to

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[44]Benson, et al., op. cit., p. 17.

[45]Coleman, et al., op. cit., p. 22.

[46]Nancy Hoyt St. John, "The Effect of Segregation in the Aspirations of Negro Youth," Harvard Educational Review, 36:284-94 (Summer 1966), p. 284.

support this hypothesis, suggesting that this relationship was more complex than generally assumed. An assumption of this hypothesis was that school segregation had as one of the following dimensions: the Negro student had exposure to peers with (1) a low expectation of success, (2) with low academic norms, and (3) high suspicion of whites.[47]

The study of Brim[48] found that among persons of equivalent intelligence those with the higher self-esteem outperformed those with lower. He concluded that this could mean that the image of self was what was presented in interaction with others and what others respond to and made judgment about. Martire[49] found a positive relationship between motivation, level of achievement, and the amount of discrepancy between ratings of the ideal and actual self on achievement related scales. More specifically, Buswell[50] found a positive relationship between social acceptance by peers and the academic performance of the pupil.

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[47] Ibid., p. 293.

[48] Orville G. Brim, Jr., "College Grades and Self-Estimates of Intellignece," Journal of Educational Psychology, 45:477-484 (December 1954), p. 482.

[49] John G. Martire, "Relationships Between the Self-Concept and Differences in the Strength and Generality of Achievement Motivation," Journal of Personality, 24:364-75 (June 1956), p. 374.

[50] Margaret M. Buswell, "The Relationship Between the Social Structure of the Classroom and the Academic Success of the Pupils," Journal of Experimental Education, 22:37-52 (September 1953), p. 51.

2. Teacher-to-Student Variables. Herriott's[51] study of 501 public schools reported the teachers of low socio-economic schools were younger, less experienced, and were less satisfied with their positions. It also reported that the teachers in low socio-economic status schools had a higher status background than that of their pupils while the status of teachers in high socio-economic status schools was lower than that of their pupils.

The report of Davis[52] is pertinent. Discussing low socio-economic pupils the following major principles were presented as being involved in the student's learning what the teacher had to teach:

a) All learning is stimulated or hindered by the feelings of the teacher towards the student.

b) All school learning is influenced by cultural evaluation which the teacher makes of the student and vice versa. The teacher rejects his background and appears to reject the student.

c) All school learning is influenced by the students cultural motivation, degree of interest and drive which he has learned from his family and peer group.[53]

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[51]Herriott, op. cit.

[52]Allison Davis, "The Future Education of Children from Low Socio-economic Groups," New Dimensions for Educational Progress, ed. Stanley Elam (Bloomington, Indiana: Phi Delta Kappa, 1962).

[53]Ibid., pp. 33-34.

It was further stated that with the present curriculum, teachers knew it was nearly impossible to teach culturally deprived children.[54]

Further evidencing the factors of teacher-pupil variables were the studies by Stringer[55] which found differences in academic progress were due in part to teacher behavior and Carter[56] which found the sex of pupils and sex of teachers interacted with female instructors less objective in grading. Relating to this Battle[57] found that the students whose value patterns were closer to the teachers' ideals would have higher grades. Thus teachers' values, per se, may be related to student achievement.

An increase in the teachers' knowledge of their elementary pupils resulted in an affect on the teachers'grading

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[54] Ibid., p. 34.

[55] Lorene A. Stringer, "Academic Progress As an Index of Mental Health," Journal of Social Issues, 15:16-29 (1959) p. 28.

[56] Robert S. Carter, "Non-Intellectual Variables Involved in Teachers' Marks," Journal of Educational Research, 47:81-95 (September 1953), p. 94.

[57] Haron J. Battle, "Relation Between Personal Values and Scholastic Achievement," Journal of Experimental Education, 26:27-41 (September 1957), p. 39.

behavior was reported by Baker.[58] He further reported that as teachers were provided with more information on their pupils, their criteria for grading tended to change.

Bendig[59] found that the search for predictive factors had focused primarily upon the various characteristics of the student. Relatively little attention had been given to the possibility that low correlations might be due to the uncontrolled sources of variations, one of which was in the awarding of the grades themselves. Fishman[60] suggested the use of uniform tests (such as standardized achievement tests) as one means of overcoming the error associated with the use of grades as an index of academic performance.

The study of Ryans[61] found certain characteristics of teacher behavior were associated with certain characteristics of pupil behavior. He found that in the elementary school,

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[58]Robert L. Baker and Roy P. Doyle, "Teacher Knowledge of Pupil Data and Marking Practices at the Elementary School Level," Personnel and Guidance Journal, 37:644-47 (May 1959), p. 646.

[59]Albert W. Bendig, "The Reliability of Letter Grades," Educational and Psychological Measurement, 13:311-321 (Summer 1953), p. 320.

[60]Joshua A. Fishman, "Unsolved Criterion Problems in the Selection of College Students," Harvard Educational Review, 28:340-49 (Fall 1958), pp. 344-45.

[61]David G. Ryans, "Some Relationships Between Pupil Behavior and Certain Teacher Characteristics," Journal of Educational Psychology, 59:82-90 (April 1961), p. 89.

pupil behavior and teacher behavior seemed to be more interdependent.[62]

A similar study by Davidson[63] reported that children's self-perceptions were similar to their perception of how the teacher felt toward them. Girls perceived teachers more favorably than boys.

3. Student-to-Family Relationship Variables. Havighurst[64] found that many teachers reported that upper and upper-middle class parents were the most difficult to deal with because these upper status families placed too high a demand upon the school and school personnel. They were critical and interfering. Families of lower social classes presented other types of problems. Their children were difficult to discipline, often because the families supported the child in behavior that was contrary to the school's middle-class standards.

Drews[65] found the mothers of high achievers were more

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[62] Ibid., p. 87.

[63] Helen H. Davidson and Gerhard Lang, "Children's Perceptions of Their Teachers' Feelings Toward Them Related to Self Perception, School Achievement and Behavior," Journal of Experimental Education, 29:107-118 (December 1960), p. 116.

[64] Robert J. Havighurst and Bernice L. Neugarten, Society and Education, (Boston: Allyn and Bacon, Inc., 1962), p. 121.

[65] Elizabeth Monroe Drews and John E. Tehan, "Parental Attitudes and Academic Achievement," Journal of Clinical Psychology, 13:328-332 (October 1957), p. 331.

authoritarian and restrictive in their treatment of their children than were the mothers of low achievers.

Report cards were treated in Stendler's[66] study which found that the parents of children of the lower social classes attached little significance to the cards. Parents in the upper classes were more likely to accept them with reservation and to hold up higher standards for their children.

II. FINANCIAL DETERMINANTS

The financial determinants investigated for this study represented the economic part of the socio-economic factors. They were treated as variables and in this respect differed from many reported studies.

Extent of Financial Support Variables

An early study of financial relationships was made by Leonard P. Ayers. In 1920, he reported a study of school expenditures for all states from 1896 to 1920. An index was developed using five (5) financial factors and five (5) non-financial factors as a cost-quality relationship. The financial factors were as follows:

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[66] Celia Burns Stendler, "Social Class Differences in Parental Attitude Toward School at Grade I Level," Child Development, 22:37-46, (March 1951), p. 46.

1. Average expenditure per child attending school.
2. Average expenditure per child of school age.
3. Average expenditure per teacher employed.
4. Expenditure per pupil for purposes other than teachers' salaries.
5. Expenditure per teacher for salaries.

The non-financial factors were as follows:

1. Per cent of school population attending school daily.
2. Average days attended by each pupil of school age.
3. Average number of days schools were kept open.
4. Per cent that high school attendance was of total attendance.
5. Per cent of boys and girls in high school.

Ayers reported a correlation of seventy-eight hundredths (.78) between an index of efficiency comprised of these factors, for each state, for the year 1918.[67]

Paul R. Mort[68] developed an instrument, the Growing Edge, that was used to test basic skills, knowledge, aptitude and behavior. It was an instrument of measuring the adaptability of the school system.

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[67]Leonard P. Ayers, An Index Number for State School Systems, (New York: Department of Education, Russell Sage Foundation, 1920).

[68]Paul R. Mort, William S. Vincent, and Clarence A. Newell, The Growing Edge, An Instrument for Measuring the Adaptability of School Systems (New York: Metropolitan School Study Council, 1946).

Wollatt[69] reported on the cost-quality relationship that utilized the Growing Edge. This study found that the subjective evidence drawn from the Growing Edge was weighted heavily in favor of the proposition that spending more on current expenditures per pupil, would develop citizens who were more competent and better adjusted than were the graduates of lower-expenditure schools, other things being equal.[70]

"The general conclusion has been that spending more money per pupil tends to give pupils school experiences of higher quality."[71]

A publication of the National Education Association[72] summarized forty years of research bearing on the relationship between school quality and costs as follows.

> 1. A higher quality education is generally provided in school systems which spend larger amounts per pupil; lower quality education is generally provided in school systems which spend smaller amounts per pupil.

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[69]Lorene Hedley Wollatt, The Cost-Quality Relationship on the Growing Edge (New York: Bureau of Publication, Teachers College, Columbia University, 1949)--Metropolitan School Study Council Research Study No. 4.

[70]Ibid., p. 67.

[71]Ibid., p. 29.

[72]Committee on Tax Education and School Finance of the National Education Association, Does Better Education Cost More? (Washington D. C.: The National Education Association, 1959).

2. Money is not everything in achieving quality education in a community; more money does not automatically produce better schools.

3. Educational quality generally increases, as measured in terms which research workers have employed thus far, as per pupil expenditure increases.

4. Specifically, when communities spend more money on their schools, they generally are able to employ and do employ better teachers. They are able to and do provide better materials and other aids to good teaching... longer school terms are maintained...there is better attendance...youths remain in school longer. Higher scores on achievement tests are made...in the elementary schools...[73]

Benson[74] reported that none of the district wealth factors appeared to show any notable relation to the reading achievement of pupils in the districts. These factors included (1) tax rate, (2) percent of change in tax rate, (3) change in tax rate, (4) percent change in assessed valuation per ada, and (5) change in assessed valuation per ada.[75]

Source of Income Variables

Benson further reported that the highest correlation with reading achievement and district income variables was a negative one and that the income variables were the per cent that state aid represents of total income and state aid per pupil.[76]

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[73] Ibid., pp. 41-43.

[74] Benson, op. cit., p. 48.

[75] Ibid., p. 48-49.

[76] Ibid., p. 48.

Benson also reported in another study that economically favored districts should no longer be allowed to claim the privilege of commanding an undue proportion of educational resources for the exclusive benefit of their resident pupils.[77]

Miner's study of variables influencing expenditures for education categorized social and economic factors in spending for public education into dependent and independent variables. The findings were that alternative state aid arrangements was the major instrument variable.[78]

Effect of Expenditure Variables

In 1933, Powell[79] concluded that higher expenditure schools did better in many areas including reading. The higher-expenditure school district teachers had longer experience and higher salaries. They had better buildings and pupils had better attendance. At the end of five years,

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[77]Charles S. Benson, "The Bright Side and the Dark in American Education," Phi Delta Kappan, 47:47-49, (September 1965), p. 47.

[78]Jerry Miner, Social and Economic Factors in Spending for Public Education, (Syracuse: Syracuse University Press, 1963), p. 152.

[79]Orrin E. Powell, Educational Returns at Varying Expenditure Levels, (New York: Teachers College, Columbia University, 1933).

children in the lower-expenditure schools were retarded as much as one year compared to achievement of higher-expenditure schools.

The study by Faber[80] found that there was a significant, positive relationship between the judged quality of a school district and the qualifications of its teachers as measured by the number with five or more years of college training.

III. SUMMARY AND CONCLUSION FROM REVIEWED RESEARCH AND LITERATURE

In summarizing this review of related literature and research, the investigator concluded:

1. Research findings relative to socio-economic status and scholastic achievement tended to confirm a relationship.

2. The identification of the socio-economic factors causative to scholastic achievement were inconclusive.

3. The relationships between I. Q. and socio-economic status have been equated and denied by researchers.

4. The disadvantaged student in the public schools is the subject of concern because of increased concentration

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[80]Charles F. Faber, "Teacher Qualifications and School District Quality," Journal of Educational Research, 58:469-71 (August 1965), p. 471.

of these pupils in certain areas and the increased recognition of the problem by educators.

The researcher has further concluded that (1) study in statistical testing of assumed relationships between academic achievement and socio-economic factors was needed, (2) by utilizing the present reports required of California school districts base-line data could be established, and (3) these data could be related to achievement as recognized by state-wide testing programs.

The literature and research which was related to this investigation has been reviewed in Chapter II. This review was undertaken in two specific areas:

1. Sociological determinants which were investigated as to demographic and ecological variables, and specific role relationships.

2. Financial determinants which were reviewed as to the extent of the financial support and the sources of income.

CHAPTER III

CHARACTERISTICS OF THE SAMPLE

I. DESCRIPTION OF THE SAMPLE

One of the differences found among California public school districts was size. Elementary and Unified School Districts within the state vary in size from less than one hundred average daily attendance to over 25,000 average daily attendance. An arbitrary figure of at least three hundred and not over three hundred seventy-five scores of first grade pupils reported on the 1966 Stanford Reading Test, Primary Level I, Form W, published by Harcourt, Brace and World, Inc., New York, was set as the range of district size to be utilized in this study.

From the districts within the range of from three hundred to three hundred seventy-five reported first grade reading test scores the six districts with the least per cent of pupils scoring below Q_1 and the six districts with the greatest per cent of pupils scoring below Q_1 of the publisher's norms of the Stanford Reading Test were selected. The six with the least per cent were designated HA, HB, HC, HD, HE, and HF. The six with the greatest percentages were designated LA, LB, LC, LD, LE, and LF. These were the high-achieving "H" districts and low-achieving "L" districts for purposes of this study and are presented in Table I.

TABLE I

PER CENT OF PUPILS SCORING BELOW Q_1 PUBLISHER'S NORMS, STANFORD READING TEST, PRIMARY I LEVEL, FORM W, GRADE ONE, 1966

High Achieving District	Number	Per Cent Below Q_1	Low Achieving District	Number	Per Cent Below Q_1
HA	348	26	LA	306	92
HB	372	27	LB	331	92
HC	361	28	LC	314	89
HD	329	35	LD	363	86
HE	319	37	LE	340	83
HF	337	47	LF	367	81
Mean		33.3	Mean		87.2
Standard Deviation		8.1	Standard Deviation		4.6

II. DESCRIPTION OF THE INDEXES USED

In addition to the percentage of pupils scoring below Q_1, the following twenty-eight indexes or variables were selected and analyzed for purposes of this study.

Assessed Valuation per Elementary Average Daily Attendance

The sum of county assessed valuation of secured and unsecured property within the school district's boundary divided by the average daily attendance of the district provided the assessed valuation per elementary average daily attendance are shown in Table II.

This index range was from $3,303 to $23,806. The mean of the high districts, $13,052, was nearly twice the mean of the low districts, $6,534.

TABLE II

ASSESSED VALUATION PER ELEMENTARY AVERAGE DAILY ATTENDANCE

High Achieving District	Assessed Valuation Per ADA	Low Achieving District	Assessed Valuation Per ADA
HA	$13,166	LA	$ 3,303
HB	23,806	LB	12,351
HC	12,242	LC	4,262
HD	12,402	LD	4,784
HE	9,021	LE	5,617
HF	7,672	LF	8,888
Mean	$13,052	Mean	$ 6,534
Standard Deviation	5,691	Standard Deviation	3,432

Cost Per Average Daily Attendance of Current Expenses of Education

The current expenses of education included all costs of administration, costs of certificated salaries which included principals, supervisors, teachers and other certificated personnel, classified salaries and other instructional expenses, health services, operation and maintenance of plant and fixed charges. Transportation expenses were excluded. The total of these district expenses was divided by the district ADA and the cost of current expenses per ADA was expressed and is presented in Table III.

TABLE III

COST PER AVERAGE DAILY ATTENDANCE OF CURRENT EXPENSES OF EDUCATION

High Achieving District	Cost	Low Achieving District	Cost
HA	$479.43	LA	$455.99
HB	607.50	LB	515.30
HC	551.24	LC	380.49
HD	578.12	LD	364.51
HE	458.23	LE	433.96
HF	418.63	LF	440.12
Mean	$515.53	Mean	$431.73
Standard Deviation	74.33	Standard Deviation	54.39

This index of cost per ADA varied from $607.50 to $364.51, a range of $242.99. The high districts tended on

the average to spend more per pupil than the low. This amounted to $83.80 per ADA.

Teachers' Salaries Expressed as Per Cent of Current Expenses of Education

The teachers' salaries as reported in Budget Classification D-213 and which constitute a part of the current expenses of education were divided by the total current expenses.

TABLE IV

TEACHERS' SALARIES EXPRESSED AS PER CENT OF CURRENT EXPENSES OF EDUCATION

High Achieving District	Per Cent Teachers' Salaries of Current Expenses of Education	Low Achieving District	Per Cent Teachers' Salaries of Current Expenses of Education
HA	64.4	LA	53.2
HB	63.2	LB	59.9
HC	61.4	LC	67.7
HD	59.5	LD	63.4
HE	61.1	LE	61.1
HF	59.9	LF	67.5
Mean	61.6	Mean	62.1
Standard Deviation	1.9	Standard Deviation	5.4

The range for the high districts was small in amount, 4.9 per cent. The standard deviation of 1.9 was also small. The low districts' range, 14.3 per cent, was greater as was the 5.4 standard deviation.

Teachers' Average Class Load, Elementary Grades, One Through Three

Classes in art, instrumental and vocational music, industrial arts, vocational arts, and physical education were excluded from the teachers' class load data presented in Table V. Also omitted were classes for mentally-retarded and educationally-handicapped children where it was possible to distinguish these classes.

The high districts' range was over seven while the low districts' showed a range of only two in the Teachers' Average Class Load.

TABLE V

TEACHERS' AVERAGE CLASS LOAD, ELEMENTARY GRADES ONE THROUGH THREE

High Achieving District	Class Load	Low Achieving District	Class Load
HA	27.8	LA	29.0
HB	23.4	LB	28.0
HC	25.5	LC	30.0
HD	26.4	LD	28.6
HE	31.0	LE	28.1
HF	29.5	LF	29.9
Mean	27.3	Mean	28.9
Standard Deviation	2.8	Standard Deviation	.9

Total Administration, Principals' and Supervisors' Salaries as Per Cent of Current Expenses of Education

The sum of administration, Budget Item D-100, Princi-

pals' Salaries, Budget Item D-211, and Supervisors' Salaries Budget Item D-212, was divided by the prior defined current expenses of education resulting in the per cent of the current expenses of education presented in Table VI.

The low districts were found to have a wide range of 10.3 per cent while the high districts clustered closely about the mean of 9.3 per cent. This was indicated by the small standard deviation of .7 for the high districts as compared with the larger standard deviation of 3.5 for the low districts. The difference between the mean was small, one per cent.

TABLE VI

TOTAL ADMINISTRATION, PRINCIPALS' AND SUPERVISORS' SALARIES AS PER CENT OF CURRENT EXPENSES OF EDUCATION

High Achieving District	Per Cent	Low Achieving District	Per Cent
HA	9.3	LA	17.6
HB	9.9	LB	11.2
HC	10.4	LC	8.1
HD	8.5	LD	9.4
HE	9.1	LE	8.7
HF	8.6	LF	7.3
Mean	9.3	Mean	10.3
Standard Deviation	.7	Standard Deviation	3.5

Text Book and Other Book Expenditures as Per Cent of Current Expenses of Education

Purchases of those books designated as California State Text Books in accordance with the California Education Code, Section 9501 and 9502, were designated as text book expenditures. This sum was divided by the current expenses of education resulting in the per cent of current expenses of education that text books represent.

Purchases of books other than text books, as defined, were divided by the current expenses of education resulting in the per cent of current expenses of education that other books represent. These are shown in Table VII. In both text book and other book expenditures, the high districts expended a greater percentage of current expenditures, .445 and 1.115 per cent, than did the low districts, .096 and .289 per cent respectively. The high districts tended to have higher ADA costs of education (Table III, page 42) and the resultant higher percentages of both text book and other book purchases would not only be relative but would be greater actual expenditures.

Average and Beginning District Elementary Teachers' Salary

The average salary of the districts' elementary teachers was computed by dividing the total amount of teachers' salaries, Budget Class D-213, by the total number of regular contracted certificated teachers.

TABLE VII

TEXT BOOK AND OTHER BOOK EXPENDITURES
AS PER CENT OF CURRENT EXPENSES
OF EDUCATION

High Achieving District	Per Cent Text Book Expenditures	Per Cent Other Book Expenditures
HA	.168	.341
HB	.566	.802
HC	.736	1.129
HD	.351	1.686
HE	.425	1.121
HF	.441	1.610
Mean	.448	1.115
Standard Deviation	.192	.504
LA	.000	.149
LB	.000	.314
LC	.120	.004
LD	.030	.258
LE	.270	.968
LF	.155	.040
Mean	.096	.289
Standard Deviation	.107	.354

The minimum beginning teachers' salary for teachers with a bachelor's degree as reported by the district's adopted salary schedule are shown in Table VIII.

The beginning teachers' salary were nearly equal as expressed as means, $5,684 for high districts and $5,653 for low districts.

The teachers' average salary mean, $8,102, and the standard deviation 743 is greater for the high districts than was the low districts mean of $7,403 and the 481 standard deviation.

Per Cent of District Income from Federal Government, from State Apportionment, and from Local Taxes of California School Districts

The total income received into the general fund of California school districts was derived from the following sources: 56.5 per cent from local sources, 36.2 per cent from state sources, 3.7 per cent from federal sources, 1 per cent from county sources, and the balance from other sources.[1] Only the local, state, and federal sources of funds were utilized in this study.

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[1]Flournoy, op. cit., p. vi.

TABLE VIII

AVERAGE AND BEGINNING DISTRICT
ELEMENTARY TEACHERS' SALARY

High Achieving District	Teachers' Average Salary	Beginning Teachers' Salary
HA	$8,329	$5,700
HB	9,159	6,000
HC	8,669	5,800
HD	7,543	5,532
HE	7,701	5,500
HF	7,210	5,572
Mean	$8,102	$5,684
Standard Deviation	743	191

Low Achieving District	Teachers' Average Salary	Beginning Teachers' Salary
LA	$6,987	$5,200
LB	7,856	5,800
LC	7,450	5,700
LD	6,825	5,820
LE	7,249	5,400
LF	8,051	6,000
Mean	$7,403	$5,653
Standard Deviation	481	297

The bulk of federal funds received by California school districts were distributed under Public Law 874 and 864, the balance being received from Federal Forest Funds and other federal sources.[2] The sum of these funds was divided by the total district income. The resultant figure was that per cent of district income received from the Federal Government.

The funds received by the district from the state apportionment and other state sources divided by the total district income provided the per cent of district income received from state apportionment and foundation support.

The funds received by the district from local taxes divided by the total income of the district provided the per cent of district income received from local taxes. These are presented in Table IX.

Per Cent of District Children Receiving Aid for Dependent Children (AFDC)

Aid for Dependent Children as utilized in this study was that figure reported by the school district to the Office of Compensatory Education. The reported total divided by the total enrollment provides the percentage of district children receiving Aid for Dependent Children.

Only one of high districts had a percentage of AFDC greater than one while only one of the low districts had a

[2]Ibid., p. x.

TABLE IX

PER CENT OF DISTRICT INCOME RECEIVED FROM FEDERAL, STATE AND LOCAL SOURCES, FISCAL YEAR 1965-66

High Achieving District	Per Cent of Funds From Federal Apportionment	Per Cent of Funds From State Apportionment	Per Cent of Funds From Local Taxes
HA	1.41	37.12	61.46
HB	0.98	20.29	78.46
HC	0.97	34.36	64.67
HD	2.02	33.69	63.45
HE	21.04	48.90	29.79
HF	2.03	55.05	42.68
Mean	4.74	38.24	56.75
Standard Deviation	8.00	12.29	17.47

Low Achieving Districts	Per Cent of Funds From Federal Apportionment	Per Cent of Funds From State Apportionment	Per Cent of Funds From Local Taxes
LA	9.49	71.50	18.10
LB	6.47	41.67	51.77
LC	0.54	76.08	21.24
LD	0.00	72.44	26.63
LE	0.31	68.37	26.53
LF	0.04	50.65	47.71
Mean	2.81	63.45	32.00
Standard Deviation	4.12	13.91	14.18

percentage as small as one. This is reflected by the small mean .703 per cent for the high districts as compared with 11.467 per cent for the low districts.

TABLE X

PER CENT OF DISTRICT CHILDREN RECEIVING AID FOR DEPENDENT CHILDREN

High Achieving District	Per Cent of Children Receiving AFDC	Low Achieving District	Per Cent of Children Receiving AFDC
HA	3.387	LA	25.773
HB	0.347	LB	1.980
HC	0.080	LC	11.139
HD	0.384	LD	5.035
HE	0.000	LE	7.164
HF	0.020	LF	17.708
Mean	.703	Mean	11.467
Standard Deviation	1.325	Standard Deviation	8.873

Racial and Ethnic Distribution of Pupils

Each school district reported to the Bureau of Intergroup Relations, California State Department of Education, the end of the first school month the total racial and ethnic distribution of pupils. The major classifications consisted of white and non-white pupils. The white classification was subdivided into (1) Spanish Surname, and (2) Other White Pupils. The non-white population was subdivided into (1) Negro, (2) Chinese, Japanese and Korean, (3) American Indian, and (4) Other Non-white.

This study utilized the following percentages of racial and ethnic distribution of pupils:

1. Per Cent of Non-white to White District Enrollment.
2. Per Cent of Spanish Surname to Other White District Enrollment.
3. Per Cent of Negro to White District Enrollment.
4. Per Cent of Spanish Surname and Non-white to Other White District Enrollment.

There was no high district with a large representation of pupils other than other white. However, four of the six low districts had majority representation of other than other white pupils, three of these were Spanish Surname and one Negro. These percentages are shown in Table XI.

Racial and Ethnic Distribution of Teachers

The studied districts reported the racial and ethnic distribution of teachers in the same manner on the same form as was required for pupils. None of the high districts reported more than token employment of minority group teachers. One low district reported slightly more than half as many Negro as other white teachers. Two other low districts reported over 10 per cent and one nearly 10 per cent. These percentages are shown in Table XII.

Racial and Ethnic Distribution of Teacher-Community Aides

The studied districts reported the racial and ethnic distribution of teacher-community aides in the same manner

TABLE XI

RACIAL AND ETHNIC DISTRIBUTION OF PUPILS

High Achieving District	Per Cent of Non-white to White Pupils	Per Cent of Spanish Surname to Other White Pupils	Per Cent of Negro to White Pupils	Per Cent of Spanish Surname and Non-white to Other White Pupils
HA	0.90	2.69	0.06	3.62
HB	1.02	5.23	0.00	6.60
HC	0.99	0.44	0.26	1.43
HD	3.68	4.44	1.09	8.28
HE	10.49	5.23	2.70	16.27
HF	1.37	2.59	0.07	4.00
Mean	3.08	3.44	.70	6.70
Standard Deviation	3.78	1.88	1.06	5.27
Low Achieving District				
LA	157.30	42.22	154.80	266.00
LB	1.56	217.20	0.24	222.20
LC	2.72	628.96	0.77	710.62
LD	0.71	4.88	0.29	5.62
LE	2.50	8.29	1.50	11.00
LF	12.59	119.64	6.58	147.29
Mean	29.56	170.20	27.36	227.12
Standard Deviation	62.73	238.81	62.48	259.79

TABLE XII

RACIAL AND ETHNIC DISTRIBUTION OF TEACHERS

High Achieving District	Per Cent of Non-white to White Teachers	Per Cent of Spanish Surname to Other White Teachers	Per Cent of Negro to White Teachers	Per Cent of Spanish Surname and Non-White to Other White Teachers
HA	1.49	2.29	0.75	3.82
HB	2.78	2.13	1.39	4.97
HC	0.00	0.77	0.00	0.77
HD	0.59	1.89	0.00	1.18
HE	0.96	0.59	0.00	2.83
HF	1.75	1.79	0.00	3.57
Mean	1.26	1.58	.36	2.86
Standard Deviation	.98	.72	.59	1.62
Low Achieving District				
LA	51.35	0.00	51.35	51.35
LB	6.96	8.49	1.74	16.04
LC	1.97	13.43	0.66	15.67
LD	1.89	0.95	0.00	2.86
LE	1.96	4.08	0.65	6.12
LF	7.69	1.96	2.89	9.80
Mean	11.97	4.82	12.72	16.97
Standard Deviation	19.47	5.19	28.26	17.62

on the same form as was required for pupils and teachers. Only one of six high districts reported using minority group teacher-community aides, 5.26 per cent. This district also reported the highest per cent, 16.27, of minority group pupils for the high districts.

Two low districts, LB and LC, employed predominately Spanish Surname Aides in a greater percentage than that indicated by pupil enrollment. The low district, LA, which had a majority enrollment of Negro pupils was the only district employing Negro aides to any extent. This representation, 70 per cent, was not in proportion to Negro enrollment of 157.3 per cent.

These percentages are shown in Table XIII.

TABLE XIII

RACIAL AND ETHNIC DISTRIBUTION OF TEACHER-COMMUNITY AIDES

High Achieving District	Per Cent of Non-white to White Teacher Community Aides	Per Cent of Spanish Surname To Other White Teacher Community Aides	Per Cent of Negro to White Teacher Community Aides	Per Cent of Spanish Surname and Non-white to Other White Teacher Community Aides
HA	0.00	0.00	0.00	0.00
HB	0.00	0.00	0.00	0.00
HC	0.00	0.00	0.00	0.00
HD	0.00	0.00	0.00	0.00
HE	5.26	0.00	5.26	5.26
HF	0.00	0.00	0.00	0.00
Mean	.88	0.00	.88	.88
Standard Deviation	2.15	0.00	2.15	2.15
Low Achieving District				
LA	70.00	11.11	70.00	88.89
LB	0.00	420.00	0.00	420.00
LC	0.00	350.00	0.00	350.00
LD	0.00	0.00	0.00	0.00
LE	4.76	0.00	4.76	4.76
LF	1.85	42.11	1.85	44.74
Mean	12.77	126.49	12.77	151.40
Standard Deviation	28.10	181.07	28.10	185.09

Total Average Daily Attendance Cost of Education, Including Transportation

This index represents the total ADA costs of education, including transportation, presented in Table XIV. It was $528.60 for the high districts and $445.88 for the low districts.

The difference of the mean between the total ADA cost of education, including transportation presented in Table XIV and the mean the cost per ADA of current expenses of education presented in Table II, page 41 is $13.07 for the high districts and $14.15 for the low districts with the total costs of education being the greater in both cases.

TABLE XIV

TOTAL AVERAGE DAILY ATTENDANCE COST OF EDUCATION, INCLUDING TRANSPORTATION

High Achieving District	Cost	Low Achieving District	Cost
HA	$501.26	LA	$470.09
HB	617.56	LB	532.62
HC	581.61	LC	383.46
HD	583.59	LD	381.56
HE	462.34	LE	454.71
HF	425.22	LF	452.83
Mean	$528.60	Mean	$445.88
Standard Deviation	76.91	Standard Deviation	57.04

General Purpose Tax Rate, District Tax Rate Levied

The General Purpose Tax Rate is expressed in terms of dollars of tax levied against each hundred dollars of assessed valuation.

The mean difference between the rates of the high districts and the low districts amounts to sixty seven cents per hundred dollars assessed valuation. The factors of higher valuation per ADA tend to increase the emphasis of this index since the districts with higher assessed valuation tend to levy a higher tax rate for purposes of education. This rate is shown in Table XV.

TABLE XV

GENERAL PURPOSE TAX RATE,
DISTRICT TAX RATE LEVIED

High Achieving District	District Tax Rate Levied	Low Achieving District	District Tax Rate Levied
HA	2.368	LA	1.741
HB	2.101	LB	2.700
HC	3.252	LC	1.822
HD	4.400	LD	2.390
HE	2.560	LE	3.090
HF	3.640	LF	2.530
Mean	3.054	Mean	2.379
Standard Deviation	.874	Standard Deviation	.519

Per Cent of Pupils Scoring Above Q_3 Publisher Norm's, Stanford Reading Test, Primary I Level, Form W, Grade One

The per cent scoring below Q_1 was presented in Table I, page 40, and was the selection criterion for this study. The per cent above Q_3 was a possible criterion for selection. By the inclusion of the index Per Cent of Pupils Scoring Above Q_3 validation and reinforcement of the selection criterion could be provided.

TABLE XVI

PER CENT OF PUPILS SCORING ABOVE Q_3 PUBLISHER'S NORMS, STANFORD READING TEST, PRIMARY I LEVEL, FORM W, GRADE ONE, 1966

High Achieving District	Per Cent	Low Achieving District	Per Cent
HA	38	LA	2
HB	35	LB	2
HC	37	LC	1
HD	35	LD	3
HE	26	LE	3
HF	18	LF	8
Mean	31.5	Mean	3.2
Standard Deviation	7.9	Standard Deviation	2.5

III. SUMMARY

For purposes of this study twelve California school districts reporting between three hundred and three hundred seventy-five test scores of the Stanford Reading Test, Primary I Level, Form W, Grade I, administered in 1966 according to state mandate, were selected. The six with the least per cent of pupils scoring below Q_1, publisher's norms, were selected and were designated high districts. The six with the largest per cent of pupils' scoring below Q_1 were selected and designated low districts.

Data were collected and reported for these high and low districts for twenty-eight indexes. These indexes, in addition to the selector index of pupils' scoring below Q_1 constitute the twenty-nine indexes or variables that are statistically treated to test this hypothesis. There is no difference in the frequency or magnitude of occurrence of certain social or economic factors between selected California school districts when grouped as high-achieving and low-achieving districts.

The correlations of the indexes by the Pearson Product Moment Method of Correlation are presented in Chapter IV, Correlations for the Indexes. Chapter V, Step-Wise Multiple Regression, reports in a step-wise manner the results of calculations for a sequence of multiple linear

regression equations for the indexes. Chapter VI, Summary of Findings, Conclusions, and Recommendations for Further Study complete the study.

CHAPTER IV

CORRELATIONS FOR THE INDEXES

The Pearson Product Moments of Correlation method was used to compute intercorrelation for each index with every other index on a twenty-nine by twenty-nine index correlation matrix to express the extent to which changes in one variable are expressed by changes in another variable. This constituted an operation in the process of step-wise multiple regression analysis. Correlation coefficients reaching .470 and greater were significant at the one per cent (.01) level of confidence with twenty-seven degrees of freedom.[1] This procedure was followed for the high-achieving and low-achieving districts.

Tables XVII through XLV were presented in a standardized format to facilitate comparison of the number of significant correlation coefficients between the different indexes. Only correlation coefficients significant at the one per cent level of confidence were reported in these tables for the high and low-achieving districts. Negatively related indexes were indicated with a negative (-) sign.

I. THE CORRELATIONS

Assessed Valuation per Elementary Average Daily Attendance

At the one per cent level of significance the index

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[1] Henry E. Garrett. Statistics in Psychology and Education (New York: David McKay Company, Inc., 1966), p. 201.

of Assessed Valuation per Elementary ADA had twelve positive and three negative correlations within the high districts; seven positive and one negative within the low districts.

The greatest correlation coefficients found within the high-achieving and low-achieving districts were negative correlations with the index Per Cent of Income from State Apportionment. These coefficients were -.916 for the high districts and -.971 for the low districts.

Other significant positive correlations within both high and low-districts were as follows: Cost per ADA of Current Expenses of Education, Elementary Teachers' Average Salary, Beginning Teachers' Salary, Per Cent of Income from Local Taxes, and Total ADA Cost of Education.

Indexes significantly correlating positively in the high districts were as follows: Teachers' Salaries as Per Cent of Current Expenses of Education, Total Administration, Principals' and Supervisors' Salaries, Per Cent of Non-white to White Teachers, Per Cent of Negro to White Teachers, Per Cent of Spanish Surname and Non-white to Other White District Teachers, Per Cent of Pupils Scoring Above Q_3, and Per Cent of Pupils Scoring Below Q_1.

Two other indexes that significantly correlated negatively within the high districts were as follows: Teachers' Average Class Load, and General Purpose Tax Rate.

Within the low districts, the following additional indexes were of significance at the one per cent level of confidence: Per Cent of Spanish Surname to Other White Aides, and General Purpose Tax Rate.

TABLE XVII

INDEXES SIGNIFICANTLY CORRELATED WITH ASSESSED VALUATION PER ELEMENTARY AVERAGE DAILY ATTENDANCE
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA		
Cost per ADA, Current Expenses of Education	.788	.707
Teachers' Salaries, Per Cent Current Expenses of Education	.560	
Teachers' Average Class Load, Grades One through Three	-.849	
Total Administration, Principals' and Supervisors' Salaries	.506	
Text Book Expenditures		
Other Book Expenditures		
Elementary Teachers' Average Salary	.838	.793
Beginning Teachers' Salary	.872	.582
Per Cent of Income from Federal Sources		
Per Cent of Income from State Apportionment	-.916	-.971
Per Cent of Income from Local Taxes	.820	.969
Per Cent Enrollment Receiving Aid for Dependent Children		
Per Cent Non-white to White Enrollment		
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment		
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers	.595	
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers	.899	
Per Cent Spanish Surname and Non-white to Other White Teachers	.475	
Per Cent Non-white to White Teacher-Community Aides		
Per Cent Spanish Surname to Other White Teacher-Community Aides		.598
Per Cent Negro to White Teacher-Community Aides		
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education	.776	.704
General Purpose Tax Rate	-.504	.547
Per Cent of Pupils Scoring Above Q_3	.565	
Per Cent of Pupils Scoring Below Q_1	.671	

Cost per Average Daily Attendance of Current Expenses of Education

The Cost per Average Daily Attendance of Current Expenses of Education significantly correlated with five indexes within both the high and low-districts. Significant correlations were also obtained for four other high and two other low districts.

The highest coefficient of absolute value within both high and low districts was that of Total ADA Cost of Education. The reported coefficients were .991 for the high districts and .995 for the low-achieving districts. Additional correlations of significance were reported with Assessed Valuation per Elementary ADA, Elementary Teachers' Average Salary, Per Cent of Income from Local Taxes, and negative correlation for Per Cent of Income from State Apportionment.

Other significant correlations within high districts were as follows: Negative Correlation for Teachers' Average Class Load, Positive Correlations for Beginning Teachers' Salary, Per Cent of Pupils Scoring Above Q_3, and Per Cent of Pupils Scoring Below Q_1.

An additional negative correlation for Teachers' Salaries as Per Cent of Current Expenses of Education, and a positive correlation for Per Cent of Income from Federal Sources were indicated for low districts.

TABLE

(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	.788	.707
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education		-.495
Teachers' Average Class Load, Grades One through Three	-.900	
Total Administration, Principals' and Supervisors' Salaries		
Text Book Expenditures		
Other Book Expenditures		
Elementary Teachers' Average Salary	.665	.529
Beginning Teachers' Salary	.626	
Per Cent of Income from Federal Sources		.664
Per Cent of Income from State Apportionment	-.935	-.786
Per Cent of Income from Local Taxes	.837	.609
Per Cent Enrollment Receiving Aid for Dependent Children		
Per Cent Non-white to White Enrollment		
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment		
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers		
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers		
Per Cent Spanish Surname and Non-white to Other White Teachers		
Per Cent Non-white to White Teacher-Community Aides		
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides		
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education	.991	.995
General Purpose Tax Rate		
Per Cent of Pupils Scoring Above Q_3	.727	
Per Cent of Pupils Scoring Below Q_1	.647	

Teachers' Salaries as Per Cent of Current Expenses of Education

Teachers' Salaries as Per Cent of Current Expenses of Education correlated at the one per cent level of significance, ten positive and three negative correlations for the high districts and ten negative and five positive correlations for the low districts.

The highest correlations coefficients of absolute value for the high district was a negative coefficient of -.987 for the index of Other Book Expenditures; and the coefficient of -.932 for Total Administration, Principals' and Supervisors' Salaries was highest for the low districts.

Other positive correlations within both high and low districts were as follows: Beginning Teachers' Salaries and Per Cent of Pupils Scoring Below Q_1.

Within high districts these following significant correlations also existed in addition to those reported on the prior identified districts: positive coefficients; Total Administrators, Principals' and Supervisors' Salaries, Elementary Teachers' Average Salary, Per Cent of Enrollment Receiving Aid for Dependent Children, Spanish Surname to Other White Teachers, Negro to White Teachers, Spanish Surname and Non-white to Other White Teachers, Per Cent of Pupils Scoring Above Q_3, and negative coefficients, for Per Cent of Income from State Apportionment, and General Purpose Tax Rate.

For the low districts additional correlations were reported for Teachers' Average Class Load, Per Cent of Spanish Surname to Other White Enrollment, Per Cent of Non-white to White Teacher-Community Aides. Negative correlations for low districts were as follows: Per Cent of Income from Federal Sources, Per Cent of Non-white to White Enrollment, Negro to White Enrollment, Non-white to White Teachers, Negro to White Teachers, Spanish Surname and Non-white to Other White Teachers, and Negro to White Aides.

TABLE XIX

INDEXES SIGNIFICANTLY CORRELATED WITH TEACHERS' SALARIES AS PER CENT OF CURRENT EXPENSES OF EDUCATION
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	.560	
Cost per ADA, Current Expenses of Education		-.495
Teachers' Salaries, Per Cent Current Expenses of Education		
Teachers' Average Class Load, Grades One through Three		.555
Total Administration, Principals' and Supervisors' Salaries	.528	-.932
Text Book Expenditures		
Other Book Expenditures	-.987	
Elementary Teachers' Average Salary	.724	
Beginning Teachers' Salary	.622	.783
Per Cent of Income from Federal Sources		-.861
Per Cent of Income from State Apportionment	-.476	
Per Cent of Income from Local Taxes		
Per Cent Enrollment Receiving Aid for Dependent Children	.736	
Per Cent Non-white to White Enrollment		-.780
Per Cent Spanish Surname to Other White Enrollment		.506
Per Cent Negro to White Enrollment		-.793
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers		-.798
Per Cent Spanish Surname to Other White Teachers	.676	
Per Cent Negro to White Teachers	.780	-.801
Per Cent Spanish Surname and Non-white to Other White Teachers	.574	-.747
Per Cent Non-white to White Teacher-Community Aides		.814
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides		-.814
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education		-.524
General Purpose Tax Rate	-.852	
Per Cent of Pupils Scoring Above Q_3	.550	
Per Cent of Pupils Scoring Below Q_1	.760	.590

Teachers' Average Class Load, Grades One Through Three

Teachers' Average Class Load correlated significantly with eighteen other indexes within the high districts, ten positive and eight negative, and with seven indexes for the low districts, four positive and three negative.

The coefficients of highest absolute value were the negative coefficients of -.968 for Per Cent of Income from Local Taxes for the high districts, and the negative coefficient of -.739 with Other Book Expenditures for the low districts.

One multiple high and low district negative correlation existed with Total ADA Cost of Education. One multiple high and low positive correlation was found with the Per Cent of Spanish Surname and Non-white to Other White Enrollment.

The additional high district positive correlations were as follows: Elementary Teachers' Average Salary, Per Cent of Income from Federal Sources, Per Cent of Income from State Apportionment, Per Cent of Non-white to White Enrollment, Negro to White Enrollment, Non-white to White Aides, Negro to White Aides, Spanish Surname and Non-white to Other White Aides and Per Cent of Pupils Scoring Below Q_1.

High district negative correlations reported were as follows: Total Administration, Principals' and Supervisors' Salaries, Beginning Teachers' Salary, Per Cent Negro to White Teachers and Per Cent of Pupils Scoring Above Q_3.

Correlation findings for the low districts included these following additional positive relationships: Per Cent of Enrollment Receiving Aid for Dependent Children, Per Cent of Spanish Surname to Other White Enrollment; and additional negative relationship with General Purpose Tax Rate.

TABLE XX

INDEXES SIGNIFICANTLY CORRELATED WITH TEACHERS' AVERAGE CLASS LOAD, GRADES ONE THROUGH THREE
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	-.849	
Cost per ADA, Current Expenses of Education	-.900	
Teachers' Salaries, Per Cent Current Expenses of Education		.555
Teachers' Average Class Load, Grades One through Three		
Total Administration, Principals' and Supervisors' Salaries	-.576	
Text Book Expenditures		
Other Book Expenditures		-.739
Elementary Teachers' Average Salary	.778	
Beginning Teachers' Salary	-.843	
Per Cent of Income from Federal Sources	.694	
Per Cent of Income from State Apportionment	.926	
Per Cent of Income from Local Taxes	-.968	
Per Cent Enrollment Receiving Aid for Dependent Children		.552
Per Cent Non-white to White Enrollment	.648	
Per Cent Spanish Surname to Other White Enrollment		.559
Per Cent Negro to White Enrollment	.604	
Per Cent Spanish Surname and Non-white to Other White Enrollment	.501	.622
Per Cent Non-white to White Teachers		
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers	-.614	
Per Cent Spanish Surname and Non-white to Other White Teachers		
Per Cent Non-white to White Teacher-Community Aides	.663	
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides	.663	
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides	.663	
Total ADA Cost of Education	-.922	-.506
General Purpose Tax Rate		-.616
Per Cent of Pupils Scoring Above Q_3	-.677	
Per Cent of Pupils Scoring Below Q_1	.654	

Total Administration, Principals' and Supervisors' Salaries as Per Cent of Current Expenses of Education

This index had thirteen significant correlations, nine positive and four negative within the high districts and fourteen correlations, ten positive and four negative for the low districts.

For the high districts the greatest absolute coefficient was .876 reported with Elementary Teachers' Average Salary, and for the low district it was .932 for Teachers' Salaries as Per Cent of Current Expenses of Education.

Multiple high-low district correlations were found with Teachers' Salaries as Per Cent of Current Expenses of Education, Text Book Expenditures, Beginning Teachers' Salary, General Purpose Tax Rate and Per Cent of Pupils Scoring Below Q_1.

The following additional significant positive correlations were reported for high districts: Per Cent of Income from Local Taxes, Total ADA Cost of Education and Per Cent of Pupils Scoring Above Q_3, and the following negative ones: Text Book Expenditures, Other Book Expenditures, and Per Cent of Income from State Apportionment.

The additional low district findings were: positive, Per Cent of Income from Federal Sources, Per Cent of Enrollment Receiving Aid for Dependent Children, Per Cent of White to Non-white Enrollment, Per Cent of Negro to White Enrollment,

Per Cent of Non-white to White Teachers, Per Cent of Negro to White Teachers, Per Cent of Spanish Surname and Non-white to Other White Teachers, Non-white to White Aides, and Negro to White Aides and negative correlations for Text Book Expenditures and Beginning Teachers' Salary.

TABLE

(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	.506	
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education	.528	-.932
Teachers' Average Class Load, Grades One through Three	-.576	
Total Administration, Principals' and Supervisors' Salaries		
Text Book Expenditures	.666	-.620
Other Book Expenditures	-.524	
Elementary Teachers' Average Salary	.876	
Beginning Teachers' Salary	.782	-.720
Per Cent of Income from Federal Sources		.928
Per Cent of Income from State Apportionment	-.556	
Per Cent of Income from Local Taxes	.489	
Per Cent Enrollment Receiving Aid for Dependent Children		.521
Per Cent Non-white to White Enrollment		.908
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment		.917
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers		.924
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers		.924
Per Cent Spanish Surname and Non-white to Other White Teachers		.908
Per Cent Non-white to White Teacher-Community Aides		.917
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides		.917
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education	.539	
General Purpose Tax Rate	-.539	-.473
Per Cent of Pupils Scoring Above Q_3	.546	
Per Cent of Pupils Scoring Below Q_1	.713	.719

Text Book Expenditures as Per Cent of Current Expenses of Education

The index of Text Book Expenditures correlated significantly with two other indexes within the high districts and six indexes within the low districts.

The largest absolute correlation coefficient was -.722 for Per Cent of Enrollment Receiving Aid for Dependent Children within the high districts and Per Cent of Pupils Scoring Below Q_1 reporting .766 within the low districts.

Other correlations within the low districts not previously reported were as follows: Other Book Expenditures, and General Purpose Tax Rate with positive correlations and Per Cent of Income from Federal Sources and Spanish Surname and Non-white to Other White Teachers.

TABLE XXII

INDEXES SIGNIFICANTLY CORRELATED WITH TEXT BOOK EXPENDITURES
AS PER CENT OF CURRENT EXPENSES OF EDUCATION
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA		
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education		
Teachers' Average Class Load, Grades One through Three		
Total Administration, Principals' and Supervisors' Salaries	.666	-.620
Text Book Expenditures		
Other Book Expenditures		.582
Elementary Teachers' Average Salary		
Beginning Teachers' Salary		
Per Cent of Income from Federal Sources		-.660
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes		
Per Cent Enrollment Receiving Aid for Dependent Children	-.722	
Per Cent Non-white to White Enrollment		
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment		
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers		
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers		
Per Cent Spanish Surname and Non-white to Other White Teachers		-.489
Per Cent Non-white to White Teacher-Community Aides		
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides		
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education		
General Purpose Tax Rate		.537
Per Cent of Pupils Scoring Above Q_3		
Per Cent of Pupils Scoring Below Q_1		.766

Other Book Expenditures as Per Cent of Current Expenses of Education

At the one per cent level of significance Other Book Expenditures correlated with a total of eleven indexes within the high districts and five within the low districts.

The greatest coefficient, a negative one, -.987 found within the high districts was with the previously reported Teachers' Salaries as Per Cent of Current Expenses of Education. The General Purpose Tax Rate was the highest absolute coefficient of .763 within the low districts.

Additional high positive correlations were found for Elementary Teachers' Average Salaries, General Purpose Tax Rate, and the Per Cent of Pupils Scoring Below Q_1. Low negative correlations within the high districts were as follows: Beginning Teachers' Salaries, Per Cent Enrollment Receiving Aid for Dependent Children, Spanish Surname to Other White Teachers, Negro to White Teachers, Spanish Surname and Non-white to Other White Teachers and Per Cent of Pupils Scoring Above Q_3.

For the low districts an additional positive correlation was reported Spanish Surname to Other White Enrollment and a negative correlation for Spanish Surname and Non-white to Other White Enrollment.

TABLE XXIII

INDEXES SIGNIFICANTLY CORRELATED WITH OTHER BOOK EXPENDITURES AS PER CENT OF CURRENT EXPENSES OF EDUCATION
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA		
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education	-.987	
Teachers' Average Class Load, Grades One through Three		-.739
Total Administration, Principals' and Supervisors' Salaries	-.524	
Text Book Expenditures		.582
Other Book Expenditures		
Elementary Teachers' Average Salary	.674	
Beginning Teachers' Salary	-.525	
Per Cent of Income from Federal Sources		
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes		
Per Cent Enrollment Receiving Aid for Dependent Children	-.749	
Per Cent Non-white to White Enrollment		
Per Cent Spanish Surname to Other White Enrollment		.483
Per Cent Negro to White Enrollment		
Per Cent Spanish Surname and Non-white to Other White Enrollment		-.573
Per Cent Non-white to White Teachers		
Per Cent Spanish Surname to Other White Teachers	-.660	
Per Cent Negro to White Teachers	-.684	
Per Cent Spanish Surname and Non-white to Other White Teachers	-.500	
Per Cent Non-white to White Teacher-Community Aides		
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides		
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education		
General Purpose Tax Rate	.858	.763
Per Cent of Pupils Scoring Above Q_3	-.543	
Per Cent of Pupils Scoring Below Q_1	.754	

Elementary Teachers' Average Salary

Of the high district variables, fourteen significantly correlated with Elementary Teachers' Average Salary, as did eight of the low district indexes.

The variable of Beginning Teachers' Salary had the greatest absolute value of .932 of the coefficients for the high districts while the low districts reported the coefficient of .831 for the index Per Cent of Income from Local Taxes.

In addition to the previously reported variables the following indexes were reported for both high and low districts: Per Cent of Income from State Apportionment (negative correlation), Total ADA Cost of Education, and Per Cent of Pupils Scoring Above Q_3.

Other high district correlations were reported for Per Cent of Income from Local Taxes, Per Cent of Negro to White Teachers, Per Cent of Pupils Below Q_1 and the negative correlation with General Purpose Tax Rate.

Additional low district correlations were reported for Beginning Teachers' Salary and Per Cent of Spanish Surname to Other White Aides.

TABLE XXIV

INDEXES SIGNIFICANTLY CORRELATED WITH
ELEMENTARY TEACHERS AVERAGE SALARY
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	.838	.793
Cost per ADA, Current Expenses of Education	.665	.529
Teachers' Salaries, Per Cent Current Expenses of Education	.724	
Teachers' Average Class Load, Grades One through Three	-.778	
Total Administration, Principals' and Supervisors' Salaries	.876	
Text Book Expenditures		
Other Book Expenditures	-.674	
Elementary Teachers' Average Salary		
Beginning Teachers' Salary	.932	.594
Per Cent of Income from Federal Sources		
Per Cent of Income from State Apportionment	-.836	-.803
Per Cent of Income from Local Taxes	.742	.831
Per Cent Enrollment Receiving Aid for Dependent Children		
Per Cent Non-white to White Enrollment		
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment		
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers		
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers	.751	
Per Cent Spanish Surname and Non-white to Other White Teachers		
Per Cent Non-white to White Teacher-Community Aides		
Per Cent Spanish Surname to Other White Teacher-Community Aides		.519
Per Cent Negro to White Teacher-Community Aides		
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education	.721	.485
General Purpose Tax Rate	-.656	
Per Cent of Pupils Scoring Above Q_3	.704	.520
Per Cent of Pupils Scoring Below Q_1	.867	

Beginning Teachers' Salary

Beginning Teachers' Salary reported significant correlations with twenty-two high district indexes and fifteen low district indexes.

The variables of greatest absolute value of the coefficients were .932 for Teachers' Average Salary for the high districts and .783 for Elementary Teachers' Salaries as Per Cent of Current Expenses of Education for low districts.

Additional variables not previously reported that were found significant for both high and low districts were: Per Cent -of Income from Local Taxes, White to Non-white Aides and Per Cent of Pupils Scoring Above Q_3. Negative correlations were found with the following: Per Cent of Income from Federal Sources, Per Cent of Income from State Apportionment, Non-white to White Enrollment, Negro to White Enrollment, Negro to White Aides.

Positive correlations were found for the following high districts: Non-white to White Teachers, Negro to White Teachers, Total ADA Cost of Education, and Per Cent of Pupils Scoring Below Q_1. Negative correlations were reported with Spanish Surname and Non-white to Other White Enrollment and Aides, and General Purpose Tax Rate.

There were three additional negative low district correlations, Per cent of Non-white to White Teachers, Negro to White Teachers, and Spanish Surname and Non-white to White Teachers.

TABLE XXV

INDEXES SIGNIFICANTLY CORRELATED WITH
BEGINNING TEACHERS' SALARY
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	.872	.582
Cost per ADA, Current Expenses of Education	.626	
Teachers' Salaries, Per Cent Current Expenses of Education	.622	.783
Teachers' Average Class Load, Grades One through Three	-.843	
Total Administration, Principals' and Supervisors' Salaries	.782	-.720
Text Book Expenditures		
Other Book Expenditures	-.525	
Elementary Teachers' Average Salary	.932	.594
Beginning Teachers' Salary		
Per Cent of Income from Federal Sources	-.518	-.554
Per Cent of Income from State Apportionment	-.790	-.505
Per Cent of Income from Local Taxes	.800	.695
Per Cent Enrollment Receiving Aid for Dependent Children		
Per Cent Non-white to White Enrollment	-.605	-.720
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment	-.627	-.734
Per Cent Spanish Surname and Non-white to Other White Enrollment	-.474	
Per Cent Non-white to White Teachers	.478	-.680
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers	.802	-.733
Per Cent Spanish Surname and Non-white to Other White Teachers		-.683
Per Cent Non-white to White Teacher-Community Aides	.471	.774
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides	-.471	-.774
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides	-.471	
Total ADA Cost of Education	.669	
General Purpose Tax Rate	-.560	
Per Cent of Pupils Scoring Above Q_3	.510	.528
Per Cent of Pupils Scoring Below Q_1	.673	

Per Cent of District Income from Federal Sources

The Index of Per Cent of District Income from Federal Sources correlated significantly with ten high districts variables and fourteen low district variables.

The indexes of Non-white to White Aides, Negro to White Aides and Spanish Surname and Non-white to Other White Aides all reported the greatest absolute coefficients of .998 for the high districts while for the low districts it was .928 for the previously reported Total Administration, Principals' and Supervisors' Salaries.

Other high and low district correlations were reported for Beginning Teachers' Salary, White to Non-white Enrollment, and Negro to White Enrollment.

Additional high district positive correlation were reported for the following indexes: Spanish Surname to Other White Enrollment, Spanish Surname and Non-white to Other White Enrollment with negative correlation for Per Cent of Income from Local Taxes.

Additional low district correlations were reported with Non-white to White, Negro to White, and Spanish Surname and Non-white to Other White Teachers, Total ADA Cost of Education and Per Cent of Pupils Scoring Below Q_1.

TABLE XXVI

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF DISTRICT INCOME FROM FEDERAL SOURCES
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA		
Cost per ADA, Current Expenses of Education		.664
Teachers' Salaries, Per Cent Current Expenses of Education		-.861
Teachers' Average Class Load, Grades One through Three	.694	
Total Administration, Principals' and Supervisors' Salaries		.928
Text Book Expenditures		-.660
Other Book Expenditures		
Elementary Teachers' Average Salary		
Beginning Teachers' Salary	-.518	-.554
Per Cent of Income from Federal Sources		
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes	-.783	
Per Cent Enrollment Receiving Aid for Dependent Children		
Per Cent Non-white to White Enrollment	.970	.779
Per Cent Spanish Surname to Other White Enrollment	.476	
Per Cent Negro to White Enrollment	.934	.785
Per Cent Spanish Surname and Non-white to Other White Enrollment	.900	
Per Cent Non-white to White Teachers		.829
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers		.799
Per Cent Spanish Surname and Non-white to Other White Teachers		.869
Per Cent Non-white to White Teacher-Community Aides	.998	.778
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides	.998	.778
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides	.998	
Total ADA Cost of Education		.647
General Purpose Tax Rate		
Per Cent of Pupils Scoring Above Q_3		
Per Cent of Pupils Scoring Below Q_1		.804

Per Cent of District Income from State Apportionment

The index of Per Cent of District Income from State Apportionment significantly correlated with twelve other indexes of the high districts and eight of the low districts.

The greatest coefficient for high districts was a negative one of -.945 with Total ADA Cost of Education. For the low districts it was the previously reported -.917 with Assessed Valuation per Elementary ADA. This coefficient was also negative.

In addition for both high and low districts the Per Cent of Income from Local Taxes correlated negatively.

Additional high districts indexes reporting significant correlations were as follows: Per Cent of Pupils Scoring Below Q_1, and negative correlation coefficients for Negro to White Teachers and Per Cent Scoring Above Q_3.

Additional negative correlations for low districts indexes were reported with the following indexes: Per Cent of Spanish Surname to Other White Aides, Total ADA Cost of Education, and General Purpose Tax Rate.

TABLE XXVII

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF DISTRICT INCOME FROM STATE APPORTIONMENT
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	-.916	-.917
Cost per ADA, Current Expenses of Education	-.935	-.786
Teachers' Salaries, Per Cent Current Expenses of Education	-.476	
Teachers' Average Class Load, Grades One through Three	.926	
Total Administration, Principals' and Supervisors' Salaries	-.556	
Text Book Expenditures		
Other Book Expenditures		
Elementary Teachers' Average Salary	.836	.803
Beginning Teachers' Salary	-.790	-.505
Per Cent of Income from Federal Sources		
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes	-.913	-.968
Per Cent Enrollment Receiving Aid for Dependent Children		
Per Cent Non-white to White Enrollment		
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment		
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers		
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers	-.713	
Per Cent Spanish Surname and Non-white to Other White Teachers		
Per Cent Non-white to White Teacher-Community Aides		
Per Cent Spanish Surname to Other White Teacher-Community Aides		-.476
Per Cent Negro to White Teacher-Community Aides		
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education	-.945	-.783
General Purpose Tax Rate		-.484
Per Cent of Pupils Scoring Above Q_3	-.813	
Per Cent of Pupils Scoring Below Q_1	.815	

Per Cent of District Income from Local Taxes

This index correlated with eighteen other indexes within the high districts and ten within the low districts.

The greatest absolute value of the coefficients for the high districts was with the previously reported index of -.968 for Teachers' Average Class Load. The coefficient for low districts was greatest with .969 for Assessed Valuation per Elementary ADA, also previously reported.

Additional significant correlations were found for Per Cent of Non-white to White Teachers-Community Aides, Total ADA Cost of Education, and Per Cent of Pupils Scoring Above Q_3 for both high and low districts and a negative correlation with Negro to White Aides.

Positive correlations within the high districts indexes were found for Negro to White Teachers and Per Cent of Pupils Scoring Below Q_1 while negative coefficients were reported for the following: Per Cent of Non-white to White, Negro to White, Spanish Surname and Non-white to Other White Enrollment and Spanish Surname and Non-white to Other White Aides.

An additional correlation was reported with the low district index of General Purpose Tax Rate.

TABLE XXVIII

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT DISTRICT INCOME FROM LOCAL TAXES
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	.820	.969
Cost per ADA, Current Expenses of Education	.837	.609
Teachers' Salaries, Per Cent Current Expenses of Education		
Teachers' Average Class Load, Grades One through Three	-.968	
Total Administration, Principals' and Supervisors' Salaries	.489	
Text Book Expenditures		
Other Book Expenditures		
Elementary Teachers' Average Salary	.742	.831
Beginning Teachers' Salary	.800	.695
Per Cent of Income from Federal Sources	-.783	
Per Cent of Income from State Apportionment	-.913	-.968
Per Cent of Income from Local Taxes		
Per Cent Enrollment Receiving Aid for Dependent Children		
Per Cent Non-white to White Enrollment	-.736	
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment	-.691	
Per Cent Spanish Surname and Non-white to Other White Enrollment	-.582	
Per Cent Non-white to White Teachers		
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers	.656	
Per Cent Spanish Surname and Non-white to Other White Teachers		
Per Cent Non-white to White Teacher-Community Aides	.756	.487
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides	-.756	-.487
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides	-.756	
Total ADA Cost of Education	.868	.607
General Purpose Tax Rate		.533
Per Cent of Pupils Scoring Above Q_3	.745	.535
Per Cent of Pupils Scoring Below Q_1	.701	

Per Cent of Enrollment Receiving Aid for Dependent Children

The variable Aid for Dependent Children significantly correlated with six other high district variables and ten low district variables.

The high district variable with the greatest absolute coefficient of -.749 was with that of Other Book Expenditures while that of the low districts was .826 for Per Cent of Non-white to White Enrollment.

In addition the indexes of Per Cent of Pupils Scoring Above Q_3 and Below Q_1 had significant correlation for the high districts and Negro to White Enrollment, Non-white to White, Negro to White, Spanish Surname and Non-white to White and Negro to White Aides were significant for the low districts. General Purpose Tax Rate indicated a negative correlation for the low districts.

TABLE XXIX

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF DISTRICT ENROLLMENT RECEIVING AID FOR DEPENDENT CHILDREN
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA		
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education	.736	
Teachers' Average Class Load, Grades One through Three		.552
Total Administration, Principals' and Supervisors' Salaries	-.514	.521
Text Book Expenditures	-.722	
Other Book Expenditures	-.749	
Elementary Teachers' Average Salary		
Beginning Teachers' Salary		
Per Cent of Income from Federal Sources		
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes		
Per Cent Enrollment Receiving Aid for Dependent Children		
Per Cent Non-white to White Enrollment		.826
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment		.810
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers		.805
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers		.802
Per Cent Spanish Surname and Non-white to Other White Teachers		.760
Per Cent Non-white to White Teacher-Community Aides		.796
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides		.796
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education		
General Purpose Tax Rate		-.615
Per Cent of Pupils Scoring Above Q_3	.475	
Per Cent of Pupils Scoring Below Q_1	.497	

Per Cent of Non-white to White Enrollment

The Per Cent of Non-white to White District Enrollment was significantly correlated with eleven other high district indexes and fourteen other low district indexes.

The Per Cent of Negro to White Enrollment had the greatest absolute value of .990 within the high districts and .999 for the low districts. In addition the coefficient of .999 for Negro to White Teachers had the same absolute value for low districts.

Additional high district correlations of significance were reported with Per Cent of Spanish Surname to Other White, and Spanish Surname and Non-white to Other White Enrollment, Per Cent of Non-white to White, Negro to White, and Spanish Surname and Non-white to Other White District Teacher-Community Aides. The General Purpose Tax Rate reported a negative correlation for high districts.

Additional low district correlations of significance were reported for Non-white to White, Spanish Surname to Other White, Negro to White, Spanish Surname and Non-white to Other White Teachers, Non-white to White, Negro to White Teacher-Community Aides and a negative correlation with Per Cent of Pupils Above Q_3 and positive correlation with Per Cent of Pupils Scoring Below Q_1.

TABLE XXX

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF NON-WHITE TO WHITE ENROLLMENT
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA		
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education		-.780
Teachers' Average Class Load, Grades One through Three	.648	
Total Administration, Principals' and Supervisors' Salaries		.908
Text Book Expenditures		
Other Book Expenditures		
Elementary Teachers' Average Salary		
Beginning Teachers' Salary	-.605	-.720
Per Cent of Income from Federal Sources	.970	.779
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes	-.736	
Per Cent Enrollment Receiving Aid for Dependent Children		.826
Per Cent Non-white to White Enrollment		
Per Cent Spanish Surname to Other White Enrollment	.549	
Per Cent Negro to White Enrollment	.990	.999
Per Cent Spanish Surname and Non-white to Other White Enrollment	.948	
Per Cent Non-white to White Teachers		.994
Per Cent Spanish Surname to Other White Teachers		-.473
Per Cent Negro to White Teachers		.999
Per Cent Spanish Surname and Non-white to Other White Teachers		.954
Per Cent Non-white to White Teacher-Community Aides	.960	.996
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides	.960	.996
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides	.960	
Total ADA Cost of Education		
General Purpose Tax Rate	-.492	-.599
Per Cent of Pupils Scoring Above Q_3		
Per Cent of Pupils Scoring Below Q_1		.472

Per Cent of Spanish Surname to Other White Enrollment

The Per Cent of Spanish Surname to Other White Enrollment significantly correlated with five other indexes of high districts and with seven of low districts.

The coefficient of greatest absolute value for both high and low districts was with Per Cent of Spanish Surname and Non-white to Other White Enrollment. The coefficient was .786 for the high and .942 for the low districts.

Additional high district correlations were reported for Negro to White Enrollment and Non-white to White Teachers. For low districts the additional correlations were reported for Spanish Surname to Other White Teachers, Spanish Surname to Other White, and Spanish Surname and Non-white to Other White Teacher-Community Aides.

TABLE XXXI

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF SPANISH SURNAME TO OTHER WHITE ENROLLMENT
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA		
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education		.506
Teachers' Average Class Load, Grades One through Three		.559
Total Administration, Principals' and Supervisors' Salaries		
Text Book Expenditures		
Other Book Expenditures		-.483
Elementary Teachers' Average Salary		
Beginning Teachers' Salary		
Per Cent of Income from Federal Sources	.476	
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes		
Per Cent Enrollment Receiving Aid for Dependent Children		
Per Cent Non-white to White Enrollment	.549	
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment	.505	
Per Cent Spanish Surname and Non-white to Other White Enrollment	.786	.942
Per Cent Non-white to White Teachers	.505	
Per Cent Spanish Surname to Other White Teachers		.911
Per Cent Negro to White Teachers		
Per Cent Spanish Surname and Non-white to Other White Teachers		
Per Cent Non-white to White Teacher-Community Aides		
Per Cent Spanish Surname to Other White Teacher-Community Aides		.681
Per Cent Negro to White Teacher-Community Aides		
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		.751
Total ADA Cost of Education		
General Purpose Tax Rate		
Per Cent of Pupils Scoring Above Q_3		
Per Cent of Pupils Scoring Below Q_1		

Per Cent of Negro to White Enrollment

The Per Cent of Negro to White District Enrollment correlated with ten other high district and thirteen other low district variables.

The high district variable of greatest absolute value was the coefficient of .990 with Per Cent of Non-white to White Enrollment and the coefficient of .999 for the low districts reported for the Per Cent of Negro to White Teachers and Non-white to White Enrollment.

The additional variables of Per Cent of Non-white to White and Negro to White Teacher-Community Aides were of significant correlation for both high and low districts.

Other high district indexes were as follows: Spanish Surname and Non-white to Other White Enrollment and Teacher-Community Aides. Low district correlations reported were: Non-white to White and Spanish Surname and Non-white to Other White Teachers and the Per Cent of Pupils Scoring Below Q_1. A negative correlation with General Purpose Tax Rate was also reported.

TABLE XXXII

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT NEGRO TO WHITE ENROLLMENT
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA		
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education		-.793
Teachers' Average Class Load, Grades One through Three	.604	
Total Administration, Principals' and Supervisors' Salaries		.917
Text Book Expenditures		
Other Book Expenditures		
Elementary Teachers' Average Salary		
Beginning Teachers' Salary	-.627	-.734
Per Cent of Income from Federal Sources	.934	.785
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes	-.691	
Per Cent Enrollment Receiving Aid for Dependent Children		.810
Per Cent Non-white to White Enrollment	.990	.999
Per Cent Spanish Surname to Other White Enrollment	.505	
Per Cent Negro to White Enrollment		
Per Cent Spanish Surname and Non-white to Other White Enrollment	.923	
Per Cent Non-white to White Teachers		.993
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers		.999
Per Cent Spanish Surname and Non-white to Other White Teachers		.954
Per Cent Non-white to White Teacher-Community Aides	.924	.998
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides	.924	.998
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides	.924	
Total ADA Cost of Education		
General Purpose Tax Rate		-.598
Per Cent of Pupils Scoring Above Q_3		
Per Cent of Pupils Scoring Below Q_1		.487

Per Cent of Spanish Surname and Non-white to Other White Enrollment

The Per Cent of Spanish Surname and Non-white to Other White Enrollment had ten significant correlations with high districts and seven with low districts.

The indexes with the greatest coefficients of absolute value were .948 for Per Cent of Non-white to White Enrollment for high districts and the coefficient of .942 of Spanish Surname to Other White Enrollment for low districts.

Per Cent of Spanish Surname and Non-white to Other White Teacher-Community correlated for both high and low districts.

Positive correlations were indicated for Per Cent of Non-white to White and Negro to White Teacher-Community Aides for the high districts while Per Cent Spanish Surname to Other White Teachers and Spanish Surname to Other White Aides correlated for the low districts.

A negative correlation of significance was reported with General Purpose Tax Rate for low districts.

TABLE XXXIII

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF SPANISH SURNAME AND NON-WHITE TO OTHER WHITE ENROLLMENT
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA		
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education		
Teachers' Average Class Load, Grades One through Three	.501	.622
Total Administration, Principals' and Supervisors' Salaries		
Text Book Expenditures		
Other Book Expenditures		-.573
Elementary Teachers' Average Salary		
Beginning Teachers' Salary	-.474	
Per Cent of Income from Federal Sources	.900	
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes	-.582	
Per Cent Enrollment Receiving Aid for Dependent Children		
Per Cent Non-white to White Enrollment	.948	
Per Cent Spanish Surname to Other White Enrollment	.786	.942
Per Cent Negro to White Enrollment	.923	
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers		
Per Cent Spanish Surname to Other White Teachers		.772
Per Cent Negro to White Teachers		
Per Cent Spanish Surname and Non-white to Other White Teachers		
Per Cent Non-white to White Teacher-Community Aides	.890	
Per Cent Spanish Surname to Other White Teacher-Community Aides		.566
Per Cent Negro to White Teacher-Community Aides	.890	
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides	.890	.690
Total ADA Cost of Education		
General Purpose Tax Rate		-.688
Per Cent of Pupils Scoring Above Q_3		
Per Cent of Pupils Scoring Below Q_1		

Per Cent of Non-white to White Teachers

The index Per Cent of Non-white to White Teachers significantly correlated with seven high district indexes and thirteen low district indexes.

The variable Per Cent of Spanish Surname and Non-white to Other White Teachers had the highest absolute coefficient .958 for the high districts while Negro to White Teachers had the highest absolute value of .995 for the low districts.

A negative correlation with General Purpose Tax Rate was reported for both high and low districts.

Other positive correlations were reported with Spanish Surname to Other White and Negro to White Teachers for high districts and Spanish Surname and Non-white to Other White Teachers, Non-white to White and Negro to White Aides, and General Purpose Tax Rate were reported for low districts.

TABLE XXXIV

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF NON-WHITE TO WHITE TEACHERS
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	.595	
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education		-.798
Teachers' Average Class Load, Grades One through Three		
Total Administration, Principals' and Supervisors' Salaries		.924
Text Book Expenditures		
Other Book Expenditures		
Elementary Teachers' Average Salary		
Beginning Teachers' Salary	.478	-.680
Per Cent of Income from Federal Sources		.829
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes		
Per Cent Enrollment Receiving Aid for Dependent Children		.805
Per Cent Non-white to White Enrollment		.994
Per Cent Spanish Surname to Other White Enrollment	.505	
Per Cent Negro to White Enrollment		.993
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers		
Per Cent Spanish Surname to Other White Teachers	.767	
Per Cent Negro to White Teachers	.800	.995
Per Cent Spanish Surname and Non-white to Other White Teachers	.958	.963
Per Cent Non-white to White Teacher-Community Aides		.987
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides		.987
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education		
General Purpose Tax Rate	-.541	-.574
Per Cent of Pupils Scoring Above Q_3		
Per Cent of Pupils Scoring Below Q_1		.506

Per Cent of Spanish Surname to Other White Teachers

The Per Cent of Spanish Surname to Other White Teachers significantly correlated with six other high district indexes and eight low district indexes.

The variable of greatest absolute value of the coefficients for high districts was .919 for Per Cent of Spanish Surname and Non-white to Other White Teachers while the Spanish Surname to Other White Enrollment coefficient of .911 had this value for the low districts.

An additional high district correlation was reported for Negro to White Teachers and a negative correlation with General Purpose Tax Rate.

Low district correlations were reported with Per Cent of Non-white to White, Spanish Surname to Other White, Spanish Surname and Non-white to Other White Aides, and negative correlations were indicated for Negro to White Aides and Per Cent of Pupils Scoring Above Q_3.

TABLE XXXV

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF SPANISH SURNAME TO OTHER WHITE TEACHERS
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA		
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education	.676	
Teachers' Average Class Load, Grades One through Three		
Total Administration, Principals' and Supervisors' Salaries		
Text Book Expenditures		
Other Book Expenditures	-.660	
Elementary Teachers' Average Salary		
Beginning Teachers' Salary		
Per Cent of Income from Federal Sources		
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes		
Per Cent Enrollment Receiving Aid for Dependent Children		
Per Cent Non-white to White Enrollment		-.473
Per Cent Spanish Surname to Other White Enrollment		.911
Per Cent Negro to White Enrollment		
Per Cent Spanish Surname and Non-white to Other White Enrollment		.772
Per Cent Non-white to White Teachers	.767	
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers	.617	
Per Cent Spanish Surname and Non-white to Other White Teachers	.919	
Per Cent Non-white to White Teacher-Community Aides		.475
Per Cent Spanish Surname to Other White Teacher-Community Aides		.815
Per Cent Negro to White Teacher-Community Aides		-.475
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		.833
Total ADA Cost of Education		
General Purpose Tax Rate	-.807	
Per Cent of Pupils Scoring Above Q_3		-.472
Per Cent of Pupils Scoring Below Q_1		

Per Cent of Negro to White Teachers

There were thirteen significant correlations with high district variables for the index of Per Cent of Negro to White Teachers and thirteen for low districts.

The greatest coefficient of absolute value with this index for high districts was that of .899 reported for Assessed Valuation per Elementary ADA with the coefficient of .999 reported for the indexes of Per Cent of Negro to White Enrollment and Non-white to White Enrollment for the low districts.

Spanish surname and Non-white to Other White Teachers, and Per Cent of Pupils Scoring Below Q_1 correlated for both high and low districts while General Purpose Tax Rate indicated a negative correlation.

Other low district significant correlations were Per Cent of Non-white to White and Negro to White Aides.

TABLE XXXVI

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF NEGRO TO WHITE TEACHERS
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	.899	
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education	.780	-.801
Teachers' Average Class Load, Grades One through Three	-.614	
Total Administration, Principals' and Supervisors' Salaries		.924
Text Book Expenditures		
Other Book Expenditures	-.684	
Elementary Teachers' Average Salary	.751	
Beginning Teachers' Salary	.802	-.733
Per Cent of Income from Federal Sources		.799
Per Cent of Income from State Apportionment	-.713	
Per Cent of Income from Local Taxes	.656	
Per Cent Enrollment Receiving Aid for Dependent Children		.802
Per Cent Non-white to White Enrollment		.999
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment		.999
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers	.800	.995
Per Cent Spanish Surname to Other White Teachers	.617	
Per Cent Negro to White Teachers		
Per Cent Spanish Surname and Non-white to Other White Teachers	.769	.959
Per Cent Non-white to White Teacher-Community Aides		.997
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides		.997
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education		
General Purpose Tax Rate	-.715	-.597
Per Cent of Pupils Scoring Above Q_3		
Per Cent of Pupils Scoring Below Q_1	.602	.504

Per Cent of Spanish Surname and Non-white to Other White Teachers

There were seven high district and fourteen low district significant correlations with Spanish Surname and Non-white to Other White Teachers.

The coefficient of greatest value for both the high and low districts was with Non-white to White Teachers with the value of .958 reported for high districts and .963 reported for the low districts.

The General Purpose Tax Rate indicated a negative correlation within both high and low districts.

Within the low districts the additional correlations of Per Cent of Non-white to White, Negro to White Teacher-Community Aides and the Per Cent of Pupils Scoring Below Q_1 were reported.

TABLE XXXVII

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF SPANISH SURNAME AND NON-WHITE TO OTHER WHITE TEACHERS
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	.475	
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education	.574	-.747
Teachers' Average Class Load, Grades One through Three		
Total Administration, Principals' and Supervisors' Salaries		.908
Text Book Expenditures		-.489
Other Book Expenditures	-.500	
Elementary Teachers' Average Salary		
Beginning Teachers' Salary		-.683
Per Cent of Income from Federal Sources		.869
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes		
Per Cent Enrollment Receiving Aid for Dependent Children		.760
Per Cent Non-white to White Enrollment		.954
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment		.954
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers	.958	.963
Per Cent Spanish Surname to Other White Teachers	.919	
Per Cent Negro to White Teachers	.769	.959
Per Cent Spanish Surname and Non-white to Other White Teachers		
Per Cent Non-white to White Teacher-Community Aides		.946
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides		.946
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education		
General Purpose Tax Rate	-.695	-.666
Per Cent of Pupils Scoring Above Q_3		
Per Cent of Pupils Scoring Below Q_1		.651

Per Cent of Non-white to White Teacher-Community Aides

From the high districts nine variables and from the low districts fifteen variables significantly correlated with the Per Cent of Non-white to White Teacher-Community Aides.

For the high districts the highest absolute value of the coefficients 1.000 was with the variables of Per Cent of Negro to White and Per Cent of Spanish Surname and Non-white to Other White Teacher-Community Aides, while the Per Cent of Negro to White Teacher-Community Aides reported the same coefficient, 1.000, for the low districts.

In addition to previously reported significant correlations the low districts had a positive correlation with Per Cent of Pupils Scoring Below Q_1 and a negative correlation with General Purpose Tax Rate.

TABLE XXXVIII

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF NON-WHITE TO WHITE TEACHER-COMMUNITY AIDES
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA		
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education		-.814
Teachers' Average Class Load, Grades One through Three	.663	
Total Administration, Principals' and Supervisors' Salaries		.917
Text Book Expenditures		
Other Book Expenditures		
Elementary Teachers' Average Salary		
Beginning Teachers' Salary	-.471	-.774
Per Cent of Income from Federal Sources	.998	.778
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes	-.756	-.487
Per Cent Enrollment Receiving Aid for Dependent Children		.796
Per Cent Non-white to White Enrollment	.960	.996
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment	.924	.998
Per Cent Spanish Surname and Non-white to Other White Enrollment	.890	
Per Cent Non-white to White Teachers		.987
Per Cent Spanish Surname to Other White Teachers		-.475
Per Cent Negro to White Teachers		.997
Per Cent Spanish Surname and Non-white to Other White Teachers		.946
Per Cent Non-white to White Teacher-Community Aides		
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides	1.000	1.000
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides	1.000	
Total ADA Cost of Education		
General Purpose Tax Rate		-.562
Per Cent of Pupils Scoring Above Q_3		
Per Cent of Pupils Scoring Below Q_1		.473

Per Cent of Spanish Surname to Other White Teacher-Community Aides

Within the high districts there were no correlations of the indexes with Per Cent of Spanish Surname to Other White Teacher-Community Aides. Eight low district indexes did report significantly correlation.

The Per Cent of Spanish Surname and Non-white to Other White Aides reported the greatest absolute value of .981 for the coefficient within the low districts.

An additional correlation with Per Cent of Pupils Scoring Below Q_1 was reported.

TABLE XXXIX

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF SPANISH SURNAME TO OTHER WHITE TEACHER-COMMUNITY AIDES
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA		.598
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education		
Teachers' Average Class Load, Grades One through Three		
Total Administration, Principals' and Supervisors' Salaries		
Text Book Expenditures		
Other Book Expenditures		
Elementary Teachers' Average Salary		.519
Beginning Teachers' Salary		
Per Cent of Income from Federal Sources		
Per Cent of Income from State Apportionment		-.476
Per Cent of Income from Local Taxes		
Per Cent Enrollment Receiving Aid for Dependent Children		
Per Cent Non-white to White Enrollment		
Per Cent Spanish Surname to Other White Enrollment		.681
Per Cent Negro to White Enrollment		
Per Cent Spanish Surname and Non-white to Other White Enrollment		.566
Per Cent Non-white to White Teachers		
Per Cent Spanish Surname to Other White Teachers		.815
Per Cent Negro to White Teachers		
Per Cent Spanish Surname and Non-white to Other White Teachers		
Per Cent Non-white to White Teacher-Community Aides		
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides		
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		.981
Total ADA Cost of Education		
General Purpose Tax Rate		
Per Cent of Pupils Scoring Above Q_3		
Per Cent of Pupils Scoring Below Q_1		.561

Per Cent of Negro to White Teacher-Community Aides

The Per Cent of Negro to White Aides correlated significantly with nine high district and fifteen low district indexes.

The Per Cent of Non-white to White and Per Cent of Spanish Surname and Non-white to Other White Teacher-Community Aides reported the highest absolute correlation coefficient of 1.000 for the high districts while Per Cent of Non-white to White Teacher-Community Aides reported a similar correlation coefficient of 1.000 for the greatest absolute value within the low districts.

The following additional correlations were reported for the low districts: Per Cent of Pupils Scoring Below Q_1 and a negative correlation with Total ADA Cost of Education.

TABLE XL

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF NEGRO TO WHITE TEACHER-COMMUNITY AIDES
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA		
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education		-.814
Teachers' Average Class Load, Grades One through Three	.663	
Total Administration, Principals' and Supervisors' Salaries		.917
Text Book Expenditures		
Other Book Expenditures		
Elementary Teachers' Average Salary		
Beginning Teachers' Salary	-.471	-.774
Per Cent of Income from Federal Sources	.998	.778
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes	-.756	-.487
Per Cent Enrollment Receiving Aid for Dependent Children		.796
Per Cent Non-white to White Enrollment	.960	.996
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment	.924	.998
Per Cent Spanish Surname and Non-white to Other White Enrollment	.890	
Per Cent Non-white to White Teachers		.987
Per Cent Spanish Surname to Other White Teachers		-.475
Per Cent Negro to White Teachers		.997
Per Cent Spanish Surname and Non-white to Other White Teachers		.946
Per Cent Non-white to White Teacher-Community Aides	1.000	1.000
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides		
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides	1.000	
Total ADA Cost of Education		
General Purpose Tax Rate		-.562
Per Cent of Pupils Scoring Above Q_3		
Per Cent of Pupils Scoring Below Q_1		.473

Per Cent of Spanish Surname and Non-white to Other White Teacher-Community Aides

The Per Cent of Spanish Surname and Non-white to Other White Aides correlated significantly with nine high district and six low district indexes.

The highest coefficient of absolute value with this index was the Per Cent of Non-white to White and Negro to White Teacher-Community Aides each reported a correlation coefficient of 1.000 for high districts and Per Cent of Spanish Surname to Other White Aides for low districts which reported .981 as the coefficient.

An additional correlation was with Per Cent of Pupils Scoring Below Q_1 and the negative correlation of Per Cent of Pupils Scoring Above Q_3 for the low districts.

TABLE XLI

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF SPANISH SURNAME AND NON-WHITE TO OTHER WHITE TEACHER-COMMUNITY AIDES
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA		
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education		
Teachers' Average Class Load, Grades One through Three	.663	
Total Administration, Principals' and Supervisors' Salaries		
Text Book Expenditures		
Other Book Expenditures		
Elementary Teachers' Average Salary		
Beginning Teachers' Salary	-.471	
Per Cent of Income from Federal Sources	.998	
Per Cent of Income from State Apportionment		
Per Cent of Income from Local Taxes	-.756	
Per Cent Enrollment Receiving Aid for Dependent Children		
Per Cent Non-white to White Enrollment	.960	
Per Cent Spanish Surname to Other White Enrollment		.751
Per Cent Negro to White Enrollment	.924	
Per Cent Spanish Surname and Non-white to Other White Enrollment	.890	.690
Per Cent Non-white to White Teachers		
Per Cent Spanish Surname to Other White Teachers		.833
Per Cent Negro to White Teachers		
Per Cent Spanish Surname and Non-white to Other White Teachers		
Per Cent Non-white to White Teacher-Community Aides	1.000	
Per Cent Spanish Surname to Other White Teacher-Community Aides		.981
Per Cent Negro to White Teacher-Community Aides	1.000	
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education		
General Purpose Tax Rate		
Per Cent of Pupils Scoring Above Q_3		-.495
Per Cent of Pupils Scoring Below Q_1		.656

Total Average Daily Attendance Cost of Education, Including Transportation

Significant correlations were reported for ten high district indexes and nine low district indexes with Total ADA Cost of Education.

The greatest absolute value for the coefficients was .991 for the high districts and .995 for the low districts. Both coefficients were for the index Cost per ADA, Current Expenses of Education.

Additional correlations were found with Per Cent of Pupils Scoring Above Q_3 for both high and low districts and Pupils Scoring Below Q_1 was a significant correlation for the high districts.

TABLE XLII

INDEXES SIGNIFICANTLY CORRELATED WITH TOTAL AVERAGE DAILY ATTENDANCE
COST OF EDUCATION, INCLUDING TRANSPORTATION
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	.776	.704
Cost per ADA, Current Expenses of Education	.991	.995
Teachers' Salaries, Per Cent Current Expenses of Education		-.524
Teachers' Average Class Load, Grades One through Three	-.922	-.506
Total Administration, Principals' and Supervisors' Salaries	.539	
Text Book Expenditures		
Other Book Expenditures		
Elementary Teachers' Average Salary	.721	.485
Beginning Teachers' Salary	.669	
Per Cent of Income from Federal Sources		.647
Per Cent of Income from State Apportionment	-.945	-.783
Per Cent of Income from Local Taxes	.868	.607
Per Cent Enrollment Receiving Aid for Dependent Children		
Per Cent Non-white to White Enrollment		
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment		
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers		
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers		
Per Cent Spanish Surname and Non-white to Other White Teachers		
Per Cent Non-white to White Teacher-Community Aides		
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides		
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education		
General Purpose Tax Rate		
Per Cent of Pupils Scoring Above Q_3	.786	.687
Per Cent of Pupils Scoring Below Q_1	.712	

General Purpose Tax Rate, District Tax Rate Levied

The General Purpose Tax Rate significantly correlated with eleven high district and seventeen low district indexes.

Other Book Expenditures had the greatest absolute coefficient value of .858 for the high districts and .763 for the low districts. An additional correlation for both high and low districts was also reported for Per Cent of Pupils Scoring Below Q_1.

TABLE XLIII

INDEXES SIGNIFICANTLY CORRELATED WITH GENERAL PURPOSE TAX RATE
DISTRICT TAX RATE LEVIED
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	-.504	.547
Cost per ADA, Current Expenses of Education		
Teachers' Salaries, Per Cent Current Expenses of Education	-.852	
Teachers' Average Class Load, Grades One through Three		-.616
Total Administration, Principals' and Supervisors' Salaries	-.539	-.473
Text Book Expenditures		.537
Other Book Expenditures	.858	.763
Elementary Teachers' Average Salary	.656	
Beginning Teachers' Salary	-.560	
Per Cent of Income from Federal Sources		
Per Cent of Income from State Apportionment		-.484
Per Cent of Income from Local Taxes		.533
Per Cent Enrollment Receiving Aid for Dependent Children		-.615
Per Cent Non-white to White Enrollment		-.599
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment		-.598
Per Cent Spanish Surname and Non-white to Other White Enrollment		-.688
Per Cent Non-white to White Teachers	-.541	-.574
Per Cent Spanish Surname to Other White Teachers	-.807	
Per Cent Negro to White Teachers	-.715	-.597
Per Cent Spanish Surname and Non-white to Other White Teachers	-.695	-.666
Per Cent Non-white to White Teacher-Community Aides		.562
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides		-.562
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		
Total ADA Cost of Education		
General Purpose Tax Rate		
Per Cent of Pupils Scoring Above Q_3		
Per Cent of Pupils Scoring Below Q_1	.524	.538

Per Cent of Pupils Scoring Above Q_3

The Per Cent of Pupils Scoring Above Q_3 correlated significantly with thirteen high district variables and with seven low district variables.

The coefficients of highest absolute value for this index was with the Per Cent of Pupils Scoring Below Q_1. For high districts the coefficient reported was .939 and for low districts .770 was reported.

TABLE XLIV

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF PUPILS SCORING ABOVE Q_3
PUBLISHER'S NORMS, STANFORD READING TEST
(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	.565	
Cost per ADA, Current Expenses of Education	.727	
Teachers' Salaries, Per Cent Current Expenses of Education	.550	
Teachers' Average Class Load, Grades One through Three	-.677	
Total Administration, Principals' and Supervisors' Salaries	.546	
Text Book Expenditures		
Other Book Expenditures	-.543	
Elementary Teachers' Average Salary	.704	.520
Beginning Teachers' Salary	.510	.528
Per Cent of Income from Federal Sources		
Per Cent of Income from State Apportionment	-.813	
Per Cent of Income from Local Taxes	.745	.535
Per Cent Enrollment Receiving Aid for Dependent Children	.475	
Per Cent Non-white to White Enrollment		
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment		
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers		
Per Cent Spanish Surname to Other White Teachers		-.472
Per Cent Negro to White Teachers		
Per Cent Spanish Surname and Non-white to Other White Teachers		
Per Cent Non-white to White Teacher-Community Aides		
Per Cent Spanish Surname to Other White Teacher-Community Aides		
Per Cent Negro to White Teacher-Community Aides		
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		-.495
Total ADA Cost of Education	.786	.687
General Purpose Tax Rate		
Per Cent of Pupils Scoring Above Q_3		
Per Cent of Pupils Scoring Below Q_1	.939	.770

Per Cent of Pupils Scoring Below Q_1

The Per Cent of Pupils Scoring Below Q_1 correlated significantly with fifteen high and fifteen low districts.

The highest coefficient of absolute value for the high districts was the reported -.939 with Per Cent of Pupils Scoring Above Q_3 while Per Cent of Income from Federal Sources reported the greatest value of .804 for low districts.

TABLE XLV

INDEXES SIGNIFICANTLY CORRELATED WITH PER CENT OF PUPILS SCORING BELOW Q_1, PUBLISHER'S NORMS, STANFORD READING TEST, PRIMARY I LEVEL, FORM W, GRADE ONE

(1% Level of Significance .470)

Index	High District Correlation	Low District Correlation
Assessed Valuation per Elementary ADA	-.671	
Cost per ADA, Current Expenses of Education	-.647	
Teachers' Salaries, Per Cent Current Expenses of Education	-.760	-.590
Teachers' Average Class Load, Grades One through Three	.654	
Total Administration, Principals' and Supervisors' Salaries	-.713	.719
Text Book Expenditures		-.766
Other Book Expenditures	.754	
Elementary Teachers' Average Salary	.867	
Beginning Teachers' Salary	-.673	
Per Cent of Income from Federal Sources		.804
Per Cent of Income from State Apportionment	.815	
Per Cent of Income from Local Taxes	-.701	
Per Cent Enrollment Receiving Aid for Dependent Children	-.497	
Per Cent Non-white to White Enrollment		.472
Per Cent Spanish Surname to Other White Enrollment		
Per Cent Negro to White Enrollment		.487
Per Cent Spanish Surname and Non-white to Other White Enrollment		
Per Cent Non-white to White Teachers		.506
Per Cent Spanish Surname to Other White Teachers		
Per Cent Negro to White Teachers	-.602	.504
Per Cent Spanish Surname and Non-white to Other White Teachers		.651
Per Cent Non-white to White Teacher-Community Aides		.473
Per Cent Spanish Surname to Other White Teacher-Community Aides		.561
Per Cent Negro to White Teacher-Community Aides		.473
Per Cent Spanish Surname and Non-white to Other White Teacher-Community Aides		.656
Total ADA Cost of Education	-.712	
General Purpose Tax Rate	.524	-.538
Per Cent of Pupils Scoring Above Q_3	-.939	-.770
Per Cent of Pupils Scoring Below Q_1		

II. SUMMARY

The Pearson Product Moment of Correlation method was used to compute intercorrelations for each index with every other index of the twenty-nine by twenty-nine (29 x 29) matrix. Each index was checked for significant correlations at the one per cent (.01) level of confidence. Over three hundred significant correlations were reported for the high districts and the same number for the low districts. The number of significant correlations of the high-achieving ranged from zero to twenty-two of a possible twenty-eight significant correlations for each of the indexes. The number of significant correlations ranged from five to seventeen of a possible twenty-eight significant correlations for the low-achieving districts' indexes.

It was recognized that each of the twenty-eight reported indexes might be influencing the selection index, Per Cent of Pupils Scoring Below Q_1, Stanford Reading Test, and at the same time it might be influencing any of the other twenty-seven indexes of the study. The step-wise multiple regression analysis was utilized to select at each step of the analysis a variable on the basis that the selected variable accounted for the greatest amount of the remaining variance. This, in effect, provided a rank-ordering of the remaining variables. This step-wise multiple regression

analysis computed the multiple correlation coefficients (Multiple R) and the variance ratio (F ratio). The Step-Wise Multiple Regression Analysis findings are presented in Chapter V.

CHAPTER V

STEP-WISE MULTIPLE REGRESSION ANALYSIS

To analyze the extent of the differences of the social and economic factors that were investigated for this study and were common to both high-achieving and low-achieving school districts the step-wise multiple regression analysis was utilized. General Statistical Program 05, Step-Wise Multiple Regression Analysis prepared by G. L. Simmons, Data Processing Center, University of Nevada, Reno, Nevada, was used. This program computed a sequence of multiple linear regressions in a step-wise manner. Variables were entered one at a time and at each step all the remaining variables were considered and the one was chosen that reduced the variance most in a single iteration. The variable that was added was the one that had the greatest partial correlation with the dependent variable partialed on the variables which already had been added, and equivalently it was the variable which, if it had been added, would have the highest F value.

The F value for including variables was set equal to one one hundredth (.01) The F value for removing variables was set equal to five thousandths (.005).

The dependent variable utilized in computing the step-wise multiple regression was the index Per Cent of Pupils Scoring Below Q_1, Publisher's Norms, Stanford Reading Test, Primary I Level, Form W, Grade One.

As each of the ordered variables was entered into the regression, the findings were presented.

I. FINDINGS OF THE STEP-WISE MULTIPLE REGRESSION ANALYSIS FOR HIGH-ACHIEVING DISTRICTS

Step One: Per Cent of Pupils Scoring Above Q_3

The first variable entered into the regression was the Per Cent of Pupils Scoring Above Q_3 in the Stanford Reading Test. The entering correlation coefficient of -.93912 was the coefficient with the highest absolute value in the correlation matrix of the dependent variable of Per Cent of Pupils Scoring Below Q_1 in the Stanford Reading Test.

The analysis of variance reported the sum of the squares of the regression with one degree of freedom to be 286,927,330 and the residual with four degrees of freedom to be 38,403,987.

The resultant F ratio of 29,884 was significant at the one per cent (.01) level of confidence with one degree of freedom for the greater mean square and 4 degrees of freedom for the lesser mean square.[1]

The including of the variable Per Cent of Pupils Scoring Above Q_3 reflects that if the criterion of selection had been that of Pupils Scoring Above Q_3 rather than Pupils Scoring Below Q_1, the sample would not have changed for the high-achieving district.

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[1]Garrett, op. cit., p. 463

The significant F ratio for this step of the analysis establishes that differences do exist between the Per Cent of Pupils Scoring Below Q_1, the dependent variable and the variable Per Cent of Pupils Scoring Below Q_3 for the high-achieving districts.

Step Two: General Purpose Tax Rate, District Tax Rate Levied

With the addition of the second index General Purpose Tax Rate to the first variable Per Cent of Pupils Scoring Above Q_3, the multiple correlation coefficient (Multiple R) of .99693 was reported.

The analysis of variance reported the sum of the squares of the regression with two degrees of freedom to be 323,345,010 and the residual to be 1,988,307 with three degrees of freedom.

The greatest mean square with two degrees of freedom was 161,672,500 and the lesser mean square was 662,769 with three degrees of freedom.

The F ratio of 243.993 was significant at the one per cent (.01) level of confidence with two degrees of freedom for the greater mean square and three degrees of freedom for the lesser mean square.

At this step of the process the addition of the variable General Purpose Tax Rate suggests that districts with

high-academic achievement, as measured in this study, tended to support their schools with a greater local effort. This index served to show the districts willingness to assume the burden of providing support for its schools at the local level. In addition, the high-achieving districts reported nearly twice the assessed valuation per elementary ADA, $13,052 compared to $6,534. The combination of these two factors were further reflected in the greater per cent of district funds being received from local taxes, 56.75 per cent for high-achieving districts contrasted with 32.00 per cent for the low-achieving districts.

Step Three: Total Administration, Principals' and Supervisors' Salaries as Per Cent of Current Expenses

The variable Total Administration, Principals' and Supervisors' Salaries as Per Cent of Current Expenses when added to the previous partialed variables of Per Cent of Pupils Scoring Above Q_3 and General Purpose Tax Rate the multiple correlation coefficient (Multiple R) increased to .99993 which reached within .00007 of perfect relationship.

The analysis of variance reported the sum of the squares of the regression with three degrees of freedom to be 325,290,400 and the residual to be 42,919 with two degrees of freedom.

The greater mean square with three degrees of freedom was 108,430,130 and the lesser mean square was 21,459 with

two degrees of freedom.

The F ratio of 5,052 was significant at the one per cent (.01) level of confidence with three degrees of freedom for the greater mean square and two degrees of freedom for the lesser mean square.

The index of Total Administration, Principals' and Supervisors' Salaries as Per Cent of Current Expenses was the variable of third importance entered into the regression. Of the twenty-eight indexes identified for purposes of study, four pertained to current expenses of education. In addition to Total Administration, Principals' and Supervisors' Salaries as Per Cent of Current Expenses, the following were included: Average Elementary Teachers' Salary, Text Book Expenditures, and Other Book Expenditures.

The inclusion of Total Administration, Principals' and Supervisors' Salaries as Per Cent of Current Expenses within the multiple regression emphasizes the importance of the function of administration in the present-day school systems and particularly the emphasis of this function within high-achieving districts.

Step Four: Per Cent of Spanish Surname and Non-white to Other White Teachers

The entering of the variable Per Cent of Spanish Surname and Non-white to Other White Teachers with the previously partialed variables increased the multiple correlation

coefficient (Multiple R) to .99999 which represented an increase of only .00006 in the relationship. This was a minor part in the relationship but it was the variable that accounted for the largest amount of the remaining variance among the remaining twenty-four variables.

The analysis of variance reported the sum of the squares of the regression with four degrees of freedom to be 325,331,920 and of the residual to be 1,396 with one degree of freedom.

The greater mean square with four degrees of freedom was 81,332,980 and the lesser mean square was 1,396 with one degree of freedom.

The F ratio of 58,262 was significant at the one per cent (.01) level of confidence with four degrees of freedom for the greater mean square and one degree of freedom for the lesser mean square.

The variable Per Cent of Spanish Surname and Non-white to Other White Teachers represents a sociological factor that previously had not been identified in the step-wise multiple regression analysis. Of the twelve indexes studied relating to racial and ethnic distribution of pupils, teachers and aides the index of Spanish Surname and Non-white to Other White was the one with the most significant differences as reported by study.

II. FINDINGS OF STEP-WISE MULTIPLE REGRESSION ANALYSIS FOR LOW-ACHIEVING DISTRICTS

Step One: Per Cent of District Income from Federal Sources

The first variable entered into the regression was the index Per Cent of District Income from Federal Sources. The entering correlation of .80381 was the coefficient with the highest value in the correlation matrix of the dependent variable, Per Cent of Pupils Scoring Below Q_1 in the Stanford Reading Test.

The analysis of variance reported the sum of the squares of the regression with one degree of freedom to be 69,025,770 and of the residual was 37,807,485 with four degrees of freedom.

The greater mean square with one degree of freedom was 69,025,770 and the lesser mean square was 9,451,871 with four degrees of freedom.

The resultant F ratio of 7.303 was not significant at the one per cent (.01) level of confidence with one degree of freedom for the greater mean square and four degrees of freedom for the lesser mean square.

The inclusion of the first variable Per Cent of District Income from Federal Sources identifies it as the one that reduced the variance the most with the single iteration. The fact that it was not significant at the one per cent (.01) level of confidence as was the corresponding first

step of the high-achieving districts analysis identified that the differences do not exist in as great as an extent within the low-achieving districts.

Step Two: Per Cent of Pupils Scoring Above Q_3

The addition of the index Per Cent of Pupils Scoring Above Q_3 was the second variable of importance for the low districts. The multiple correlation coefficient (Multiple R) of .94623 was reported at this step.

The analysis of variance reported the sum of the squares of the regression with two degrees of freedom to be 95,653,920 and of the residual to be 11,179,332 with three degrees of freedom.

The greater mean square with two degrees of freedom was 47,826,960 and the lesser mean square was 3,726,444 with three degrees of freedom.

The F ratio of 12.834 was not significant at the one per cent level of confidence with two degrees of freedom for the greater mean square and three degrees of freedom for the lesser mean square.

While the addition of the second factor to the regression increased the multiple correlation coefficient to .94623 it just surpassed the high-achieving district correlation coefficient of .93912 at the first step.

This tends to indicate that if the achievement criterion were to be established as Per Cent of Pupils Scoring

Above Q_3 the low districts identified would not be with the strong a relationship as would that of the high-achieving districts.

The lack of significance for the F ratio at this step indicated that the selected group of indexes in application to the low-achieving districts was not as indicative of differences as were these same group of indexes when applied to high-achieving districts.

Step Three: Beginning District Elementary Teachers' Salary

The variable Beginning District Elementary Teachers' Salary when added to the previously partialed variables Per Cent of District Income from Federal Sources and Per Cent of Pupils Scoring Above Q_3, increased the multiple correlation coefficient (Multiple R) to .99204 which represented an increase of .04581 in the coefficient.

The analysis of variance reported the sum of the squares of the regression with three degrees of freedom to be 105,140,120 and of the residual to be 1,693,135 with two degrees of freedom.

The greater mean square with three degrees of freedom was 35,046,706 and the lesser mean square was 846,567 with two degrees of freedom.

The F ratio of 41.40 was not significant at the one per cent (.01) level of confidence with three degrees of freedom for the greater mean square and two degrees of freedom

for the lesser mean square.

With the entry of the third variable the one per cent (.01) level of confidence was not reached. However, the index reporting starting salaries for teachers represents a statistical difference that is greater than all but two of the twenty-eight variables included in this study.

Step Four: Other Book Expenditures as Per Cent of Current Expenses of Education

The entering of the variable Other Book Expenditures as Per Cent of Current Expenses of Education with the previously partialed variable increased the multiple correlation coefficient to .99998 at this final step in the stepwise multiple regression analysis.

The analysis of variance reported the sum of the squares of the regression with four degrees of freedom to be 106,830,640 and of the residual to be 2,614 with one degree of freedom.

The greater mean square with four degrees of freedom was 26,707,660 and the lesser mean square was 2,614 with one degree of freedom.

The F ratio of 10,213 was significant at the one per cent level (.01) of confidence with four degrees of freedom for the greater mean square and one degree of freedom for the lesser mean square.

It was only when the final stage of the step-wise multiple regression was reported that the level of confidence was reached. The partialed variables included the following:

1. Per Cent of District Income from Federal Sources.
2. Per Cent of Pupils Scoring Above Q_3.
3. Beginning District Teachers' Salary.
4. Other Text Book Expenditures as Per Cent of Education.

Only then did the F ratio reach the indicated level of confidence.

III. SUMMARY OF STEP-WISE MULTIPLE REGRESSION ANALYSIS

The reaching of significance at the one per cent (.01) level of confidence for the F ratio at all steps of the step-wise multiple regression analysis for the high-achieving districts allowed the rejection of the following hypothesis:

> There is no difference in the extent and occurrence of certain social or economic factors within selected California school districts when grouped as high-achieving and low-achieving districts when the measure of achievement utilized was the per cent of pupils scoring below Q_1 of the state mandated Stanford Reading Test.

The variables with significant differences in order of their appearance within the step-wise multiple regression analysis were as follows:

1. Per Cent of Pupils Scoring Above Q_3.
2. General Purpose Tax Rate.

3. Total Administration, Principals' and Supervisors' Salaries as Per Cent of Current Expenses of Education.

4. Per Cent of Spanish Surname and Non-white to Other White Teachers.

For the low-achieving districts the rejection of the hypothesis was possible only at the fourth and final step of the step-wise multiple regression analysis. It was at this step that the one per cent (.01) level of confidence was reached for the F ratio. It was only when the following variables:

1. Per Cent of District Income from Federal Sources.

2. Per Cent of Pupils Scoring Above Q_3.

3. Beginning District Elementary Teachers' Salary.

4. Other Book Expenditures as Per Cent of Current Expenses of Education.

were included in the equation was significance reached.

Differences did exist between the sample high-achieving and low-achieving California school districts studied by this investigator in the extent of occurrence of certain social and economic factors. Seven of twenty-eight variables were identified as significant. Four variables were identified with the high-achieving districts and four variables with low-achieving districts. Of these only one, Per Cent of Pupils Scoring Above Q_3, is common to both high-achieving and low-achieving districts. It appeared at different steps in the analysis, step one for the high and step two for the low districts. The F ratio was significant at the one per cent

(.01) level of confidence for the high districts and it was not significant for the low districts at the first inclusion of this variable in the regression analysis.

The remaining three indexes for the high districts General Purpose Tax Rate; Total Administration, Principals' and Supervisors' Salaries as Per Cent of Current Expenses of Education; and Per Cent of Spanish Surname and Non-white to Other White Teachers were distinctly different from the remaining three variables reported for the low-achieving districts which were Per Cent of District Income from Federal Sources; Beginning District Elementary Teachers Salary, and Other Book Expenditures as Per Cent of Current Expenses of Education.

CHAPTER VI

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER STUDY

The specific purpose of this study was to test the following hypothesis:

> There is no difference in the extent of occurrence of certain social or economic factors within selected California school districts when grouped as high-achieving and low-achieving districts where the measure of achievement utilized is the per cent of pupils scoring below Q_1 of the state mandated Stanford Reading Test, Primary I Level, Form W, administered in May, 1966 to all first grade pupils in California public schools.

Twenty-eight factors, reflecting social and economic data required to be reported by all California public school districts to the State Department of Education were selected as the variables of this study. Six districts, reporting test scores of between three hundred and three hundred seventy-five first grade pupils, with the least per cent of pupils scoring below Q_1 in the Stanford Reading Test were selected as high-achieving districts and six districts within the same enrollment range, but with the greatest per cent of pupils scoring below Q_1 in the same test were selected as low-achieving districts. These twelve districts constituted the sample districts.

The Pearson Product Moment of Correlation method was used to compute the intercorrelations for each variable of the twenty-nine by twenty-nine matrix. These correlation

coefficients were reported with acceptance of significance set at the one per cent (.01) level of confidence.

A Step-Wise Multiple Regression Analysis was completed. An analysis was made of the findings. The following summary of findings, conclusions and recommendations for further study is presented.

I. FINDINGS

Although they do not comprise all which may be derived from the study, the following findings seem to be the most relevant to the purpose of the investigation:

Summary of Findings for High-Achieving Districts

1. Over three hundred correlation coefficients significant at the one per cent (.01) level of confidence were found to exist between the twenty-nine variables except for the variable of Per Cent of Spanish Surname to Other White Teacher-Community Aides.

2. The Per Cent of Pupils Scoring Above Q_3 had the highest correlation coefficient with the dependent variable Per Cent of Pupils Scoring Below Q_1 in the Stanford Reading Test for the first grade, and was the first variable partialed in the Step-Wise Multiple Regression Analysis.

3. The additional variables partialed in the step-wise multiple regression analysis were as follows: General Purpose Tax Rate; Total Administration, Principals' and Supervisors' Salaries as Per Cent of Education; and Per Cent of Spanish Surname and Non-white to Other White Teachers.

4. The F ratio calculated for the four steps of the step-wise multiple regression analysis was significant at the one per cent (.01) level of confidence.

5. The hypothesis that there is no difference in the extent of occurrence of certain social or economic factors within selected California school districts when grouped as high-achieving and low-achieving districts where the measure of achievement utilized is the per cent of pupils scoring below Q_1 of the state mandated Stanford Reading Test, Primary I Level, Form W, administered in May, 1966 to all first grade pupils in California public schools was rejected by the significant findings of the step-wise multiple regression analysis.

Summary of Findings for the Low-Achieving Districts

1. Over three hundred correlation coefficients significant at the one per cent (.01) level of confidence were found to exist between the twenty-nine variables. The reported data on racial and ethnic factors relating to teacher aides were very limited.

2. The Per Cent of District Income from Federal Sources had the highest correlation coefficient with the dependent variable Per Cent of Pupils Scoring Below Q_1 in the Stanford Reading Test and was the first variable partialed by the step-wise multiple regression analysis.

3. The additional variables partialed by the step-wise multiple regression analysis were as follows: Per Cent of Pupils Scoring Above Q_3 in the Stanford Reading Test; Beginning District Elementary Teachers' Salaries; and Other Book Expenditures as Per Cent of Current Expenses of Education.

4. The F ratio calculated for the four steps of the step-wise multiple regression analysis was not significant at the one per cent (.01) level of confidence until the fourth and final variable was entered into the analysis.

5. The hypothesis that there is no difference in the extent of occurrence of certain social or economic factors within selected California school districts when grouped as high-achieving and low-achieving districts where the measure of achievement utilized is the per cent of pupils scoring below Q_1 of the state mandated Stanford Reading Test, Primary I

Level, Form W, administered in May, 1966 to all first grade pupils in California public schools was rejected by the significant findings of the step-wise multiple regression analysis.

II. CONCLUSIONS

Within the limitations of the restricted sample which limited this investigation to reporting the findings only for high-achieving and low-achieving districts of three hundred to three hundred seventy-five first grade Stanford Reading Test scores reported, the following conclusions are suggested from this study:

1. The more than six hundred intercorrelations which identified relationships through the Pearson Product Moment of Correlation method indicated that the variables selected for study were for the most part variables related to the quality of education as reported by the standardized, state mandated reading test.

2. The data which were reported for the racial and ethnic distribution of teacher aides indicated they did not exist in any quantity within the high-achieving districts studied.

3. The step-wise multiple regression analysis provided a statistical method of treating the relationships in such a manner as to provide rank-order identification of the variables which most reduces the variance. These identified variables could serve as a base for predictions that could be made in future experimental studies and situations for the purpose of identifying causality.

4. The step-wise multiple regression analysis indicated that an increase in one variable may result in the increase in a second and the second may bring about an increase in the first. This was apparent in the low-achieving district variables partialed by the first three steps of the step-wise multiple regression which were not significant

at the indicated level of confidence, yet became significant when the fourth variable was added to the analysis.

5. The sample districts reported a seemingly unusual large portion of pupils scoring below Q_1 in the reading tests and an unusually small portion of pupils scoring above Q_3 for the same districts on the same tests. This was observed for both the high-achieving and low-achieving districts of the sample.

6. The focus of this study was on the study of variables which are to a great extent amenable to control and change by the district itself rather than on the pupils of the district. With the identification of the variables that indicated differences it would seem that changes might be more readily effected within the district.

7. The identification of General Purpose Tax Rate as a significant variable for the high-achieving districts tends to support the conclusion that these high-achieving districts tend to utilize a greater share of their wealth to achieve educational goals.

8. The identification of the significance of Total Administration, Principals' and Supervisors' Salaries as Per Cent of Current Expenses of Education for the high-achieving districts supports the conclusion that the providing for administrative leadership is one of the facets of high achievement as measured in this study.

9. The identification of Per Cent of Spanish Surname and Non-white to Other White Teachers as a significantly different variable by the step-wise multiple regression analysis and it is not reported as significant by the intercorrelation matrix suggests that this variable along with the other racial and ethnic variables of teachers and teacher aides require further study. The limited conclusion is presented that the index of Per Cent of Spanish Surname and Non-white to Other White Teacher Community was the fourth and final variable considered in the step-wise multiple regression and that this variable accounted for the largest amount of the remaining variance. Utilization of the variables identified by this study as significant would require inclusion of this variable.

10. The identification of Per Cent of District Income from Federal Sources as the variable of first rank in the step-wise multiple regression analysis suggests that a strong relationship exists between the source of school district funds and the achievement as measured by the study for low districts. It was not significant at the indicated level of confidence, but when reinforced with the other ranked variables of the step-wise multiple regression the significance is reached.

11. The third variable ranked by the step-wise multiple regression analysis for low-achieving districts was Beginning Elementary Teachers' Salary. The inclusion of this economic variable suggests that starting teachers' salaries have still to reach the point where they can be disregarded in educational studies. While significance was not reached at this point, the inclusion of this variable underlines its importance.

12. The final variable, Other Book Expenditures as Per Cent of Current Expenses of Education, when partialed into the step-wise multiple regression analysis caused the F ratio to significance at the indicated level of confidence. It is concluded that this variable represents a lack of expenditures for other books for the low-achieving districts and as such represents a finding of importance by this investigation.

13. The variable Per Cent of Pupils Scoring Above Q_3 in the Stanford Reading Test was the only variable partialed by the step-wise multiple regression analysis that was common to both high and low-achieving districts. It was ranked first for the high districts and second for the low districts. This reported finding suggests the conclusion that high-achieving districts, as defined by this study, have correlated high and low test score groupings. The low-achieving districts exhibit this characteristic to a lesser extent.

RECOMMENDATIONS FOR FURTHER STUDY

1. It is recommended that studies be undertaken in California school districts to validate and retest the significance of the variables identified by this study as significant.

2. It is recommended that studies be undertaken in California school districts to test other variables not identified by this study along with the identified variables.

3. It is recommended that although this study concerns California school districts, it has implications for other public school systems inasmuch as these data are commonly reported by other school systems.

4. It is recommended that on-going studies be undertaken within selected districts to provide data on the reading test results of the mandated testing programs and the changes of the studied significant variables identified by this study.

5. It is recommended that an analytical study be made of the relationship of the significant findings of this study with other research studies relating reading and reading achievement to methodology, curriculum content and grade placement of pupils.

6. It is recommended that a regression equation be formulated from the significant variables identified by this study and predictions made on future Stanford Reading Test results to provide further validation for this research.

7. It is recommended that an in-depth study be made of the many significant correlation coefficients reported for the variables identified as significant by this study. It is further recommended that these intercorrelations be examined on a larger sample population than reported by this study.

8. It is recommended that upon validation of significance of the variables identified by this study, experimental situations be provided with certain variables controlled. Among the variables amenable

to control, the following should be considered:

a. Minority group teacher representation.

b. Costs of administration as part of current expenses of education.

c. Beginning teachers salaries.

d. Other book expenditures.

9. It is recommended that studies be undertaken to establish data relating the sources of income and financial support of schools to achievement. The areas of rural-urban, industrial-agricultural, and poverty-affluent could be basis for studies.

10. It is recommended that other reported data such as mathematic test scores and intelligence quotients be studied in relation to the findings of this study.

11. It is recommended that because of the limited data reported on the racial and ethnic composition of teachers and teacher-community aides, research be made on the effects of reported achievement and racial and ethnic composition changes. Included in the scope of this research could be that relating to compensatory education programs relating to the disadvantaged.

12. It is recommended that the relationship reported between Per Cent of Pupils Scoring Above Q_3 and the Per Cent of Pupils Scoring Below Q_1 be further investigated. The differences between high and low-achieving districts regarding these variables could serve as a basis for further study.

This investigation further recommends that in spite of the inadequacies and shortcomings of this study, that further studies be undertaken to digest, analyze and synthesize the abundance of data relating to achievement, finance, administration, staff, pupils, curriculum and other facets of California public education maintained by the California State

Department of Education and subject to cross-sectional or longitudinal studies treating the data with modern statistical procedures utilizing data processing.

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